5-2019

Social Emotional Learning Strategies for Students in Self-Contained Classrooms: A Systematic Review and Quick Reference Guide for Evidence-Informed Curricula Selection

Amelia Jones
University of Puget Sound

Paige Kensil
University of Puget Sound

Jared Peltzman
University of Puget Sound

Erica Petru
University of Puget Sound

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May 2019

This evidence project, submitted by

Amelia Jones, Paige Kensil, Jared Peltzman & Erica Petru

has been approved and accepted
in partial fulfillment of the requirements for the degree of
Master of Science in Occupational Therapy from the University of Puget Sound.

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Project Chairperson: Jennifer Pitonyak, PhD, OTR/L, SCFES

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OT635/636 Instructors: George Tomlin, PhD, OTR/L, FAOTA; Renee Watling, PhD, OTR/L, FAOTA

_____
Director, Occupational Therapy Program: Yvonne Swinth, PhD, OTR/L, FAOTA

_____
Dean of Graduate Studies: Sunil Kukreja, PhD

Key words: Social Emotional Learning (SEL), self-contained classroom, occupational therapy

Abstract

This research project was conducted in collaboration with Heather Austin, OTR/L and the Puyallup School District. Through discussion with Heather, we determined that there is a need to study the efficacy of social-emotional learning (SEL) curricula for children with severe disabilities who often do not receive the same comprehensive SEL instruction as their peers in general education classrooms. A mixed-methods systematic review of the literature was conducted on strategies and interventions for SEL for students ages 3-12 years old in classrooms that serve students with severe disabilities. We analyzed 19 articles published in peer-reviewed journals by reviewing each for statistically significant results pertaining to SEL outcomes for the population of interest. Results indicated the majority of curricula included in this research had mixed to positive outcomes. Interventions with statistically significant findings included play-based treatments, art therapy, mindfulness, and theory of mind training, as well as branded curricula and strategies such as ICME, PATHS, Integra Social Competence Program, and Second Step.

Critically Appraised Topic findings were translated into the development of a quick reference guide which was organized by SEL outcome and structured according to the Collaborative for Academic, Social, and Emotional Learning core competencies. Each outcome contained suggestions on dosage, intervention approaches, and resources for application. An in-service and survey were completed to evaluate usability of this product by practitioners and educators working in school-based settings. Fifty percent of respondents worked with students in self-contained classrooms. Overall the survey data revealed a positive trend of ratings and qualitative feedback from respondents and a good match of SEL outcomes addressed in the quick reference guide to needs identified by practitioners. A primary implication of our research is that the field of occupational therapy needs to capitalize on its potential to provide support to students with disabilities around their social participation and emotional regulation. Occupational therapy can support teachers in implementing SEL curricula and interventions to promote positive outcomes and reduce maladaptive behaviors.

Executive Summary

The purpose of our research was to determine the best practices and curricula available for providing social-emotional learning (SEL) to students ages 3-12 years old in self-contained classrooms or with severe disabilities. Self-contained classrooms can encompass a range of student demographics and needs. For the purposes of our research, we focused on those classrooms that serve students with severe complex disabilities that affect cognition. According to the Collaborative for Academic, Social, and Emotional Learning (CASEL), "SEL is the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" (CASEL, 2019).

To establish our research question, we met with our collaborator, Heather Austin, OTR/L, a pediatric OT in the Puyallup School District. Through discussion and inquiry with Heather, we determined that she and her colleagues would be interested in learning more about best practice for modified SEL interventions for students in self-contained classrooms. Our final research question was, "What is the evidence for strategies and curricula for providing social-emotional learning to children aged 3-12 yo in classrooms that serve students with severe disabilities?"

A systematic literature review was performed yielding nineteen articles that met our inclusion and exclusion criteria. Articles summarized and analyzed into a critically appraised topic (CAT) table, determining that despite many of the studies having statistically significant outcomes, sample sizes were smaller, and administrators were not typically occupational therapists. Of the studies we analyzed, 12 had statistically significant changes resulting in improved social-emotional skills for students with disabilities. The interventions in these studies addressed 12 distinct SEL goals.

To translate this knowledge, we wanted to create a tool that would aid practitioners in the selection of an evidence-based approach to teaching SEL outcomes. We decided to create a quick reference guide, including only the studies with statistically significant outcomes from the CAT. Interventions and programs were organized by the type of SEL outcome(s) addressed and categorized according to the CASEL. Each intervention was organized into subsections including background info, setting and administration, dosage and significant findings, and further resources such as official websites, PDFs, and/or media and tools for purchase online. A page was also included listing major SEL curricula, if no particular need were being addressed and the therapist or educator desired to implement a program addressing a variety of outcomes at the classroom level. We also developed a satisfaction survey looking at ease and likelihood of use, the most important or high priority SEL outcomes in the guide, and any concerns or suggestions for future improvement.

Following its creation, the quick reference guide was presented to Heather Austin, OTR/L and some of her colleagues within the Puyallup School District. Reception to this product was positive, and all attendees filled out the satisfaction survey regarding efficacy and potential usage of the guide. Emphasis was placed on specific SEL outcomes such as emotional awareness, self-regulation, and peer interactions. No significant critiques were made, barring a suggestion to break down interventions further by student age and/or developmental level.

CRITICALLY APPRAISED TOPIC (CAT) PAPER

Focused Question

What is the evidence for strategies and curricula for providing social-emotional learning to children aged 3-12 yo in classrooms that serve students with severe disabilities?

Prepared By

Amelia Jones, Paige Kensil, Jared Peltzman, Erica Petru

Date Review Completed

11/20/2018

Professional Practice Scenario

A school-based therapist is concerned that students in the self-contained classrooms in which she works aren't receiving the same social-emotional interventions as their peers in general education classrooms. The students in the self-contained classroom present with a variety of disabilities including, but not limited to visual, cognitive, hearing, low IQ and low adaptive skills. The broad nature of disabilities in the self-contained classroom necessitates an individualized approach to social-emotional learning. She is seeking adaptations or alternatives to the Tier 1 social-emotional learning curriculum currently used across the Puyallup school district (Second Step), that would be appropriate and effective with students in the self-contained classrooms.

Search Process

Procedures for the selection and appraisal of articles

Inclusion Criteria

There were four inclusion criteria for this review; (1) Social-emotional learning (or applicable synonym) approach addressed in study, (2) intervention approach is carried out in a self-contained classroom or with children with a severe disability, (3) article is written in English or has been translated into English, and (4) participants in study were between 3 and 12 years old.

Exclusion Criteria

Four criteria warranting exclusion were identified; (1) articles published before 1980, (2) interventions that were focused only on the general education population, (3) intervention/study was not completed in the school setting, and (4) diagnosis indicated child was high functioning enough to be in general education classroom.

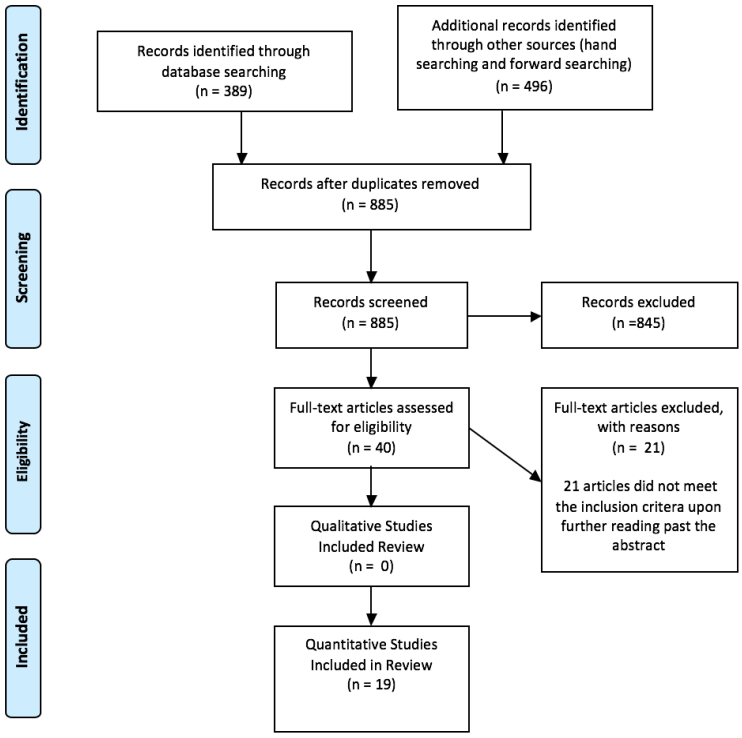
Search Strategy

Categories	Key Search Terms
Patient/Client Population	Students, clients, individuals, children, elementary age, special education, service model, learning disability, students with disabilities, special education (SPED), service model, learning disability, students with disabilities, self-contained classroom, low IQ, low adaptive skills, intellectual disability (ID)
Intervention (Assessment)	Intervention, treatment, effective strategies Social emotional learning (SEL), social skills training, Second Step
Comparison	*N/A*
Outcomes	Emotional regulation, self-regulation, social emotional development, social skills, emotional management, conflict

	resolution, social emotional wellbeing

Databases, Sites, and Sources Searched
AJOT
PubMed
OT Search
ERIC
UW Libraries Advanced Search
PsychINFO
Primo search Collins Memorial Library
Eight hand searched articles

Search Outcomes/Quality Control/Review Process



The process of developing a search question and criteria was heavily influenced by our initial meeting, and follow-up phone conversation with our collaborating practitioner, Heather Austin. The question and exclusion criteria were further influenced by our project chair, Jenny Pitonyak, who gave insight from her expertise in the pediatric field.

Our initial searches were guided by our original question; "What are the best practices and curricula available for providing social-emotional learning to students in self-contained classrooms?" This original question was stricter about finding specific intervention protocols and implementation of intervention within a self-contained classroom. After an advisory meeting with our research chair, we altered the research question to be inclusive of nonspecific intervention protocols, and expanded implementation outside a self-contained classroom. This shift in question (and subsequent inclusion/exclusion criteria) allowed for a broader search and yielded more articles.

After our preliminary searches it was clear that there is an abundance of literature on SEL programs for students with high functioning disabilities. These types of studies, while interesting, are not helpful to our clinical question. The self-contained classroom Heather would like to implement SEL programs

in serves a lower functioning population (as evidenced by low IQ and adaptive functioning skills). In response to this realization we added an exclusion criterion that focused our search on students with lower functioning skills (excl: diagnosis indicated child was high functioning enough to be in general education classroom).

Throughout searching with the various search terms previously identified, 885 articles were screened for the study. It was clear from either the titles or abstracts that 845 articles did not meet the inclusion criteria, mostly due to population (studies on students without severe disabilities or outside 3-12 years old). Thus 40 full-text articles were left to assess fully. After reading further in the remaining articles, 21 more were excluded. These exclusions were primarily due to conflict with the exclusion criteria, usually concerning the population of interest. The final number of included articles was 19, all of which were quantitative in nature.

Results of Search

Search Strategies

Keywords	**Date**	**Database**	**# Hits**	**# Excluded**	**# Retained**
“Self-contained classroom” AND “social-emotional learning”	9/20/18	*AJOT*	22	21	1
("social emotional learning" OR "SEL") AND ("self-contained classroom" OR "special education")	9/20/18	PubMed	9	9	0
“Social emotional learning” AND “self-contained classroom”	9/22/18	ERIC	3	0	3
“Social skills” AND “self-contained classroom”	9/22/18	ERIC	8	7	1
“Self-contained classrooms” AND “social-skills” AND “low-IQ”	10/16/18	UW Libraries Advanced Search	8	8	0
“Self-contained classrooms” AND “social-skills” AND “low adaptive skills”	10/16/18	UW Libraries Advanced Search	1	1	0
“Special education” AND “social-skills” AND “low adaptive skills”	10/16/18	UW Libraries Advanced Search	6	7	1
“Social emotional learning” AND “self-contained classroom”	10/16/18	UW libraries advanced search	12	10	2
“Special education” OR “self-contained classrooms” AND “social emotional learning” OR “SEL” AND “elementary” NOT “high school”	10/16/18	UW Libraries Advanced Search	27	26	1

"Emotional regulation" AND "special education" AND "elementary" NOT "adolescent" NOT "teen" NOT "middle school" NOT "high school"	10/16/18	UW Libraries Advanced Search	85	82	3
Hand searched: Estell, D. B., Jones, M. H., Pearl, R., Van Acker, R., Farmer, T. W., & Rodkin, P. C. (2008). Peer groups, popularity, and social preference: Trajectories of social functioning among students with and without learning disabilities. *J Learn Disabil, 41*(1), 5-14. doi:10.1177/0022219407310993	10/16/18	UW Libraries Advanced Search	55	54	1
"Second step" AND "self-contained classroom" AND "elementary"	10/16/18	UW libraries advanced search	24	23	1
"Social skills training" AND "self-contained classroom" AND "intervention" AND "elementary" NOT "highschool" NOT "middle school"	10/16/18	UW Libraries Advanced Search	15	13	2
"Social skills" AND "special education"	10/17/18	OT Search	16	15	1
"Social emotional learning" AND "special education"	10/17/18	ERIC	19	16	3
Hand searched: (Pfieffer, Clark & Arbesman, 2018)	10/18/18		37	36	1
Hand searched: Cavioni, V., Grazzani, I., & Ornaghi, V. (2017). Social and emotional learning for children with Learning Disability: Implications for inclusion. *International Journal of Emotional Education, 9*(Special Issue), 2nd ser., 100-109. Retrieved September 22, 2018.	10/19/18	Google Scholar search	66	63	3
Hand-picked: Bullying prevention unit from second step website "review of research link"	10/21/18		85	84	1
"Second step program" OR "second step curriculum AND special education"	10/21/18	ERIC	80	79	1
Social emotional learning AND special education OR self-contained classroom	10/21/18	PsychINFO	594	594	0
Hand searched: (Espelage et al., 2016)	10/21/18		52	51	1

Hand searched: (Stagnitti, O'Connor & Sheppard, 2012)	10/22/18		31	27	4
Hand searched: (Malboeuf-Hurtubise, Joussemet, Taylor & Lacourse, 2018)	10/22/18		37	35	2
Hand Searched: (Adibsereshki, Abdolahzadeh, Karmilo & Hasanzadeh, 2014)	11/7/18		46	44	2
Forward search: (Adibsereshki, Abdolahzadeh, Karmilo & Hasanzadeh, 2014)	11/13/18	Google scholar	3	3	0
Forward search: Malboeuf-Hurtubise, c., Lacourse, E., Taylor, G., Joussemet, M., & Ben Amor, L. (2017). A mindfulness-based intervention pilot feasibility study for elementary school students with severe learning difficulties: Effects of internalized and externalized symptoms from an emotional regulation perspective. *Journal of Evidence-Based Complementary & Alternative Medicine, 22,* 473-481. doi: 10.1177/2156587216683886	11/13/18	Google Scholar	3	3	0
Forward search: Malboeuf-Hurtubise, C., Joussemet, M., Taylor, G., & Lacourse, E. (2018). Effects of a mindfulness-based intervention on the perception of basic psychological need satisfaction among special education students. *International Journal of Disability, Development and Education, 65,* 33-44. doi: 10.1080/1034912X.2017.1346236	11/13/18	Google scholar	1	1	0
Forward search: (O'Handley, Radley, & Cavell, 2016)	11/13/18	Google scholar	5	5	0
Forward search: (Stagnitti, O'Connor, & Sheppard, 2012)	11/13/18	Google scholar	44	41	3
Hand searched: Lantz, J.F., Nelson, J.M., & Loftin, R.L. (2004). Guiding children with autism in play: Applying the integrated play group model in school settings. *TEACHING Exceptional Children, 37*(2) 8-14	11/13/18		28	26	2

"Intellectual disability" AND "social skills" AND "self-contained classroom"	11/18/18	Primo advanced search	55	55	0

Summary of Study Designs of Articles Selected for the CAT Table

Pyramid Side	**Study Design/Methodology of Selected Articles**	**Number of Articles Selected**
Experimental	_1_Meta-Analyses of Experimental Trials _4_Individual Blinded Randomized Controlled Trials _3_Controlled Clinical Trials _1_Single Subject Studies	9
Outcome	___Meta-Analyses of Related Outcome Studies _1_Individual Quasi-Experimental Studies w/ Covariates _1_Case-Control or Pre-existing Groups Studies _5_One Group Pre-Post Studies	7
Qualitative	___Meta-Syntheses of Related Qualitative Studies ___Group Qualitative Studies w/ more Rigor ___prolonged engagement with informants ___triangulation of data (multiple sources) ___confirmation (peer/member-checking; audit trail) ___comparisons among individuals, w/i a person ___Group Qualitative Studies w/ less Rigor ___Qualitative Study on a Single Person	
Descriptive	___Systematic Reviews of Related Descriptive Studies _2_Association, Correlational Studies _1_Multiple Case Series, Normative Studies, Descriptive surveys ___Individual Case Studies	3
AOTA Levels I-6 II-4 III-5 IV-4 V- Comments:		*TOTAL number of articles* =19

Summary of QUANTITATIVE Evidence

Author **Year** **Journal** **Country**	**Study Objectives**	**Study Design/ Level of Evidence**	**Participants: Sample Size, Description Inclusion and Exclusion Critera**	**Interventions & Outcome Measures**	**Summary of Results**	**Study Limitations**
Bhan & Farooqui 2013 *Disability, CBR & Inclusive Development* India	1) To identify the underlying causes of emotional awareness deficits in students w/ LD 2) To train pre-selected students in SEL strategy 3) Analyze effects of program on students' awareness and comprehension of emotions	RCT; equivalent groups design I E2 7/10	N=30 (EG n=15 CG n=15) 9-12 yo students attending English medium schools in Mumbai. Incl: All students had LD and difficulty w/ emotional understanding. Excl: Not meeting incl criteria	**I:** 8 45 min sessions w/ students using metacognitive I C ME strategy administered in English CG did not receive tx **O:** Test on Emotional Understanding	Sig ↑ in post-test scores for EG (mean paired difference =21.07; t= –22.45, p<0.0005) Sig ↑ btwn exp pre-post test scores for pictorial scenarios (t= –18.009, p<0.0005), written scenarios (t= –16.718, p<0.0005), & emotional expression (t= –8.940, p<0.0005)	Smaller sample size Lack of generalizability Maturation threat

Boyd et al. 2018 *Journal of Autism and Developmental Disorders* USA	Determine the efficacy of the ASAP intervention over 4 years for classrooms of children 3-5yo with ASD or DD	Cluster RCT, assignment at classroom level I E2 9/10	N=161 (EG=85, CG=76) 3-5yo Incl: ASD or DD dx, enrolled in preschool (self contained or inclusive programs) Excl: visual/hearing impairment, seizures, neurogenic syndrome, no exposure to English at home	**I:** 4yrs ASAP 40min per wk 1:1 for each child, 3 grp activities per school day CG: usual preschool classroom **O:** SPA, and observational coding of social-communication play skills: social interaction, requesting, engagement and joint attention	↑in social and play skills was not sig (p>.05) EG ↓scores sig more than CG on "unengaged" scale (d=-0.56) EG ↑sig more than CG on scores for "some engagement" (d=0.50) and "overall engagement" (d=0.49) scales	Flexibility in teaching strategies may have impacted the uniformity in administering ASAP. The length of the study combined with the critical developmental period of subjects may have contributed a maturation effect. Treatment adherence was based on teacher interview only.
Kam et al. 2004 *Journal of Emotional and Behavioral Disorders* USA	Explores efficacy of PATHS SEL curriculum in reducing dysfunctional bx and promoting greater self awareness and emotional regulation among SPED students.	RCT I E2 6/10	N=133 (36F, 97M) 1st-3rd Grade 7 elementary schools w/ mixed-age, self-contained classrooms Incl: All students w/ LD, mild cognitive	**I:** PATHS: SEL program 1 yr of SEL intervention 3 units for ↑ generalization: "Self-control," "Feelings," & "Problem-solving" Teachers given 3 day PATHS training workshop and	EG: Sig ↑ in internalizing bxs, but slower rate than CG Sig. ↓ in teacher-reported externalizing bxs (0.37 pts/year) Sig. greater ↑ in negative affective vocabulary (T ratio = 2.832, p < 0.05; Cohen's d = 0.54). Sig. dif btwn ↓ rates of self-reported depression (T ratio = 3.134, p <	Lack of similar mean baselines. btwn CG & EG Study not generalizable to mainstream classrooms. Potential misuse of Tier 1 curriculum at an individual level

			deficits, socio-bx deficits, and/or phys disabilities; enrolled in tx or CG schools and available for pre-post, and follow-up tests; 1º edu in self-contained classrooms Excl: Does not meet incl criteria	implemented curriculum CG: Individualized school curricula O: CBCL–Teacher Report Form; TCRS; KAI; SPSI; ChDI	0.05; Cohen's *d* = 0.49) w/ EG exhibiting greatest decline in depression. CG: Stat sig. ↑ in externalizing bxs for CG (0.72 pts/year). Sig. ↑ in internalizing bxs, at faster rate than EG No sig diffs in: SC, problem solving skills, & "feelings vocabulary" PATHS effective in SPED classrooms, changes can be sustained more long-term.	
Sullivan et al. 2015 *Remedial and Special Education* USA	Explore the impact of Second Step curriculum for 6th graders on peer victimization, aggression, and emotional regulation, while examining the intervention effects on disability status.	Cluster RCT, with pretest-posttest and two follow-up measures I E2 6/10	*N*=457 (EG=231 CG=226) 23% in SPED (n=105) 10-14yo SPED student dx as a % of N: 4% - speech language impairment,	**I:** Second Step curriculum for 1 semester. Ctrl: typical health/PE activities, no violence prevention curriculum **O**: *Student-reported*	Overt aggression sig diff across disability and age subgroups from wave 1 to wave 4 $t(772)=2.74$, $p=.006$ Lg interaction effect on relational victimization for students w/ disabilities; ↓EG, ↑CG ($d=-.58$, $p=.040$)	Lack of data on intervention effects between specific disability dx. due to small *N* of students w/ disabilities. Self-report measure only, no direct observation data.

			11% - LD, 2% - ID, 2% - ED, 3% - other) Incl: 6th graders in three selected southeastern US middle schools Excl: failure to consent	*measures*: PBFS-S *Teacher-reported measures*: PBFS-T, CBCL, ERC Pretest, Posttest at end of school year follow-up tests at 3mos, 12mos	sig ↓ for EG students with disabilities experiencing relational victimization, teacher report (*d*=-.58, *p*=.26)	No control for maturation effect.
Adibsereshki et al. 2013 *J of SPED & Rehab* Iran	Investigate the effectiveness of ToM training to improve sociability of students w/ID.	RCT, pre-post test. I E2 7/10	N=60 (30F, 30M) Tx 1 *n* = 15 F, Tx 2 *n*=15M 8-13 yo Ctrl: matched for age, gender, and IQ. Regular school programming instead of tx. Incl: dx of ID, enrolled in SPED, verbal comm, ToM test score <19, WISC-R score 50-70, parental consent.	**I:** 3 wk (9 session) individual tx led by trained therapist in ToM **O:** 38 item ToM test.	Experimental grps sig ↑ in mean score of socialization: F(1, 40)=14.57, *p*=0.001. Sig ↑ in F socialization compared to M: F(1, 40)=8.13, *p*=0.007.	Potential bias of parent report, concern over parent education level (question of reliability). Lack of follow-up data. Limited demographic info does not indicate heterogeneity of sample.

			Excl: not meeting incl criteria.			
D'Elia et al. 2014 *J Autism Dev Disord* ITL	Investigate effect of low intensity TEACCH for preschoolers w/ ASD on severity of autism, adaptive bx and language skills. Evaluate parental stress and parent perception of their children's maladaptive behaviors.	Two-group, non-randomized longitudinal study II E3 6/10	N=30(EG=15 CG=15) Incl: ASD dx, 2.0-6.11yo, no other medical dx, 2yr intervention agreement Excl: not meeting incl criteria	**I**: 24mos participation in TEACCH program w/ class-based (2hr) and home-based (2hr) components. Led primarily by educators. Ctrl: psychomotor and speech therapy only **O**: ADOS, VABS, CDI, CBCL, PSI-SF	EG and CG: sig ↓ autism severity scores on ADOS (p<0.001), sig ↑ language skills on CDI (p<0.001), sig ↑ adaptive skills on VABS (p<0.001). EG ↓ parental stress on PSI while CG did not change, sig dif between grps (p<0.01)	No alternative treatment to compare to small sample size, limited generalizability no evaluation of cognitive skills to see interaction effects Did not take any precautions to manage maturation effect
Milligan et al. 2016 *Journal of Child & Family Studies* CAN	Examines impact of SC program individually tailored for students w/ LD and comorbid MH	1 grp, mixed method, prospective controlled clinical trial III E3 5/10	N=36 (n=30; 8F, 22M) Mean age=11.4 yo Setting: Urban community-based pediatric MH center Incl: Children w/ comorbid LD and MH; IQ	**I:** (SC) Group program **O:** SSIS-parent/teacher reports; subscales incl Top Ten Coding of grp sessions videos; qual. assessment of social competence	Sig ↑ in goal-directed initiation (Wilks' k = 0.64, F [2, 25] = 7.02, p = .004) Sig ↑ Top Ten Bxs: (t(22) = -2.35, p = .03) Sig ↑ in SSIS subscales: Assertion (t[22] = -2.05, p = .05, d = .43), & Engagement (t[22] = -2.8, p = .01, d = .59)	Potential lack of generalizability

			scores, avg to above avg; ≥ 1 academic area sig lower than cog ability; Stat sig challenges in: info processing, ER, & peer relationships Excl: Does not meet incl criteria	skills w/ adapted version of IRA Qual Interviews	Qual Interviews: Children's outcomes- 1) Improved social self concept 2) ↑ initiation 3) Enhanced ER Parents-Improvements in child's social self-concept & confidence 75% of teachers noticed sig + changes in children	
Thompson & Johnston 2013 *Physical and Occupational Therapy in Pediatrics* USA	Investigate effect of an integrated approach of social stories and sensory integrative-based strategies to increase self-regulation of 3 preschool aged children with ASD.	SCED Multiple baseline across participants IV E4 4/7	N=3 (two 3 yo, one 5 yo) Incl: score of "Definite Difference" on at least one of SPSC subtest, no uncorrected visual/hearing impairment, ≥4/6 interest in book on Preschool Book Interest scale, one or more bxs that interferes w/ daily edu activities	**I**: interventionist read each social story to participant one-on-one, then discussed and practiced strategies in the story. **O**: Child 1: stay seated in his chair during circle time Child 2: stay seated during snack time Child 3: tactile play with teachers and peers	All 3 children showed ↑ in desired bx and use of social story strategies during intervention period. Self-regulation strategies remained for 2/3 children during the maintenance period.	Observers/scorers were not blinded during data collection. Interventionist error was noted for one of the subjects. There was large variability in the baseline data for one of the subjects.

Horowitz 2016 Impact Evaluation, i3 Development Grant. Office of Innovation and Improvement (Dept. of Edu.) USA	Investigating the impact of EASE on academic achievement and social emotional behavior.	Cluster quasi-experimental design, with matched comparison w/ students from same school II O3 3/6	N=759 (EG=190, CG=569) 2 cohorts of 2nd-4th graders in SPED across 23 sites Dx of: ASD, ED, ID, multiple disabilities	**I**: 2yr intervention of EASE program in SPED classrooms. **O**: social-emotional behavior as measured by the SANDI, teacher report on SEL using wkly ratings.	Modest, yet significant, effect size (*d*=.18, *p*=.005) for improving students SEL Teacher report showed significant ↑ (*p*<.001) in socialization skills, engagement, time on task, following directions, and communication skills.	The SANDI is specifically for students with ID, but was used for a broader population. EG/CG were not randomized. Lack of peer review. No control for subject maturation, and typical SEL for their age.
O'Connor et al. 2011 *Research in Developmental Disabilities* AU	Comparison of Learn to Play to a non-play intervention on play, behavior, language and social skills.	Quasi-experimental w/ pre-post data collection. II O2 5/6	N=35 (EG=19 CG=16; 16F, 19M) 5-7yo (*m*=6y2mo) dx: ID (all), DS, DD, ADHD, vision/hearing loss, ASD. Incl: enrolled in specialist school, 5-8yo.	**I:** Learn to Play 1hr 2x/wk for 6 mos conducted and assessed by 7 teachers, 1 OT, 2 SLP, 4 SLP students. **O:** play, behaviors, language, & social skills using; ChIPPA, GAS, PLS-4, PIPPS.	EG: sig ↑ in social interaction (PIPPS) (*p*=.005), and total GAS scores (*p*=.000). Sig ↓ in social disruption and disconnection (PIPPS) (*p*=.002), and play deficits (ChIPPA) (*p*=.048). CG: sig ↑ in total GAS scores (*p*=.000), sig ↑ in totaly language scores (*p*=.037) no sig diff btwn grps when stats are adjusted	EG and CG were sig different in baseline measures. CG had received pilot play intervention 4mos prior to study. Due to length of study maturation effects may interfere with true therapeutic gains.

			Excl: not meeting incl.		for sig dif baseline measures.	
Stagnitti et al. 2012 *Australian Occupational Therapy Journal* Australia	Investigate the relationship between play, language, and social skills of children after The Learn to Play program.	1 group, pre-post test III O4 6/6	N=19 students (11 M, 8 F) 5-6 yo Incl: in SPED, WISC-IV score <70, dx of ID, parental consent. Excl: not meeting any incl criteria.	**I:** Learn to Play program 1hr 2x/wk for 6 mo by trained therapists. **O:** ChIPPA, PIPPS	Sig ↑ in social interaction: ChIPPA:(r=0.61, *p*=0.01, r2=0.37), PIPPS: sig ↑ in social interaction (r=0.7, *p*<0.01, r2=0.49). Sig ↓ in social disconnection: ChIPPA:(r=-0.63, *p*<0.01, r2=0.397), PIPPS: (r=-0.61, *p*<0.01, r2=0.36).	Minimal demographic info does not indicate diversity of sample. No control for unknown variables. Maturity was not taken into account. Possible bias of teacher rating (PIPPS).
Malboeuf-Hurtubise et al. 2017 *Journal of Evidence-Based Complementary & Alternative Medicine* CAN	Evaluate the feasibility & impact of an MBI on MH symptoms of elementary students w/severe LDs.	1 group, pre-post test III O4 5/6	N=14 (8F, 6M; 1 teacher) 9-12 yo Incl: enrollment in SPED class for students w/LDs, parent consent, ability to speak and understand French.	**I**: 60 min MBI 1x/wk for 8 wks led by trained therapist w/wkly HW assignments & additional in-class practice. **O**: BASC-II Teacher Report Form, CAMM.	BASC-II Teacher Report Form: sig ↓ in mean aggression scores (Wilks's □=.60, F[1, 13]=8.35, *p*=.01, partial ŋ2=.39) and conduct problems (Wilks's □=.38, F[1, 13]=21.13, *p*=.001, partial ŋ2=.61). CAMM: no scores provided. Item analysis indicated items most sensitive to tx were linked to non-judgment of feelings.	Small homogenous sample. No control for unknown variables. Potential bias of teacher report form. Lack of follow-up data.

			Excl: not meeting incl criteria.			Lack of a measure to assess emotional regulation.
Malboeuf-Hurtubise et al. 2018 *International Journal of Disability, Development and Education* CAN	Evaluate the feasibility & impact of an MBI on perception of need satisfaction in elementary students w/severe LDs.	1 group, pre-post test III O4 3/6	N=14 (43% M, 57% F) 9-12 yo Incl: enrollment in SPED class for students w/LDs, parent consent, ability to speak and understand French. Excl: not meeting incl criteria.	**I**: 8 wk 60 min MBI 1x/wk led by trained therapist w/wkly HW assignments. **O**: student-completed questionnaire.	sig ↓ in composite score of need satisfaction (Wilks's □=.65, F[1, 13]=6.85, *p*=.02, partial ŋ2=.35) and levels of competence (Wilks's □=.66, F[1, 13]=6.73, *p*=.02, partial ŋ2=.34).	Small homogenous sample. No control for unknown variables. Lack of follow-up data.
O'Handley et al. 2016 *Preventing School Failure* USA	Investigate effect of the Superheroes Social Skills on reducing maladaptive bx of students with identified disabilities in a self-contained classroom.	1 group, pre-post test (ABC design) III O4 3/6	N=6 (n=5 received full tx; 3F, 3M) 8-12 yo Incl: participation in self-contained classroom, demonstration of disruptive bx, high-incidence disability.	**I**: Superheroes Social Skills program. **O**: Direct Observation, Target Skill Accuracy, The Friendship Survey, (CIRP).	↓disruptive bx. *M*=48.4% →*M*=5.9% strong effect: NAP=0.93. ↑ skill accuracy: Get ready: *M*=36.7%→*M*=90.7%; Following directions *M*=58.3%→*M*=91.67%; Turn taking *M*=13.3%→ *M*=100%.	Small homogenous sample. No control for unknown variables. Removal of 1 participant may have impacted group dynamic.

			Excl: not meeting Incl criteria.		Friendship Survey scores ↑. *M*=1.8→ *M*=2.8. CIRP: high level of treatment acceptability M=5.7.	Multiple tx components, cannot determine causality of any single component.
Miller et al. 2005 *Preventing School Failure* USA	Determine effects of a social skills intervention on inappropriate behavior for a self-contained class of students with high-incidence disabilities	Multiple baseline, three intervention phases across two groups II O4 5/6	N=7(2F, 5M) 6.74-9.97 yo Students in SPED self-contained classroom, dx of high-incidence disability with behavioral difficulties (ED, SLD, ID, ADHD) Incl/Excl not listed	**I:** 30min, 3-4 days/wk for 6wks, direct instruction of social skills based off identified acquisition deficits (12hrs total), in SPED classroom, student teacher led **O:** Direct observation using MOOSES on ICB, AET, BP.	↓ ICB for both groups (negative effect sizes; -1.65, -0.87), not maintained after intervention ended. Both grp mean AET ↑ and variability ↓ from baseline to intervention (effect sizes: 2.5, 1.29) Variable results from BP in both groups across phases	Inconsistent intervention delivery (spanned two school breaks) Direct intervention intervals were limited to 15 min Outcome measures didn't directly measure social skills targeted by intervention Sample contained large variability in academic skill level
Espelage et al. 2015	Assess the impact of the Second Step SEL curriculum on rates of bullying,	Mixed methods - survey data on participants in 3-yr RCT/nested longitudinal cohort design	N=123 EG=47 (15.6% cognitive disability, 3.1% multiple disabilities)	**I:** Second Step curriculum for 3 academic years, variable intensity.	Bullying perpetration sig ↓ in EG (β17=−.15, SE=0.07, p<0.05) Bully victimization and physical aggression did	No objective measures or triangulation of outcomes regarding bullying,

Remedial and Special Education USA	victimization, and fighting on middle school students with disabilities.	IV D2 2/3	CG=76 (6.6% cognitive disability) 11-12 yo Incl: Any student labeled with disability based on IDEA classifications.	**O:** survey data from 4 time points on demographics, bully perpetration, victimization, and physical violence.	not have a sig interaction effect. The authors did not report changes in outcomes analyzed by disability diagnosis.	victimization, and aggression. Analysis method did not assess changes in outcomes based on disability type. No control for maturation.
Espelage et al. 2016 *Remedial and Special Education* USA	Assess the impact of the Second Step SEL curriculum for middle school students with disabilities.	Mixed methods - survey data on participants in 3-yr RCT/nested longitudinal cohort design IV D2 2/3	N=123 EG=47 (15.6% cognitive disability, 3.1% multiple disabilities) CG=76 (6.6% cognitive disability) 11-12 yo Incl: Any student labeled w/ disability eligible for inclusion regardless of disability type, not including students receiving services under a 504 plan.	**I:** Second Step curriculum for 3 academic yrs, variable intensity. **O:** PSSM, EC, COO, Willingness to Intervene in Bullying Episodes	Willingness to intervene in bullying situation clinically sig effect size at time 3 (g=0.67, 95% CI [.21, 1.14]). Survey results increased between survey waves, but was not statistically sig, and there was no statistically sig dif betwn EG and CG.	Self-report is difficult for some students with disabilities. Additionally, study analysis did not report data by individual disability condition, which limits understanding of how students with different characteristics respond to the int. Maturation not controlled.

Machado 2017 *Thesis: Educational Specialist (Ed.S.) in School Psychology* USA	Assessed effect of Second Step SEL curriculum on skills of students with disabilities.	Mixed methods: pre-test/post-test survey and social interactions data observation IV D3 2/3	N=18 (8F, 10M) SLD=11, SLI=1, HOH=1, OHI=3, Dual criteria=3 Incl: 3rd-6th grade students at specific elementary school receiving SPED	**I**: 10 wks of Second Step curriculum implemented in classroom setting **O**: Skills Survey-Student and Teacher. 30 min social interaction observations.	Results were higher but not statistically sig for teacher post-test ($t(17)=1.40$, $p=0.18$, $d=0.33$) and student pre-test and post-test ($t(17)=-1.32$, $p=0.20$, $d=-0.31$). No change in social initiation but moderate change in social response.	Did not include students with severe disabilities, and analysis did not separate students who are HOH/OHI from students with SLD/SLI. Did not fully implement Second Step curriculum. Distractions disrupted teacher and researcher observations of social behaviors.

Table Summarizing the *Meta-Analyses/Meta-Syntheses/Systematic Review* Evidence

Author Year Journal Country	**Study Objectives**	**Study Design/ Level of Evidence**	**Number of Papers Included, Incl/ Excl Criteria**	**Interventions & Outcome Measures**	**Summary of Results**	**Study Limitations**
Pfieffer et al. 2018 *AJOT* USA	To assess best practices in cognitive and occupation-based I that address self-regulation of children with challenges in	Systematic Review of evidence at AOTA Levels I, II, III, and Level IV if they were SCED with multiple baselines	Papers reviewed: 60 (32 LI, 8 LII, 13 LIII, 2 LIV, 5 LV). Span of years: 2007 - May 2015 Databases searched: 5	Cognitive interventions focused on self-regulation and executive functioning as outcome measures.	**Cognitive:** Cognitive I indicated ↑ inhibitory control & social cognition, $p<0.01$. I outside of school/clinic may	The review was limited by a lack of research on cognitive and occupation-based interventions with appropriate measures. The

	sensory processing.	and multiple participants.	Incl=peer-reviewed, English, focus on children/adolescents with SP/SI Excl=data from presentations, conference proceedings, dissertations, theses	Occupation-based interventions used ASD symptoms, self-report, sensory profile, and teacher-report outcomes.	transfer skills to home/community. **Occupation-based:** Leisure activities improve social, sensory, and emotional outcomes. More group time associated w/ ↑ social motivation, $p<0.038$.	findings do not all lend easily to implementation, as the authors suggest that horseback riding is an effective intervention to improve social interaction and sensory processing.

Abbreviations Key

↑ = increase/increased
↓ = decrease/decreased
→ = pre-post change
+= positive
≥ = greater than or equal to
1° = primary
ADHD = Attention Deficit Hyperactivity Disorder
ADOS = Autism Diagnostic Observation Schedule
AET = Academic engaged time
AOTA = American Occupational Therapy Association
ANOVA = analysis of variance
ASAP = Advancing Social-communication And Play
ASD = Autism Spectrum Disorders
avg = average
BASC-II = The Behavior Assessment System for Children, Second Edition
BP = behavioral points
Btwn = between
Bx = behavior(s)
CAMM = The Children and Adolescent Mindfulness Measure
CBCL = Child Behavior Checklist
CDI = MacArthur Communicative Developmental Inventories
CG = control group
ChDI = Children's Depression Inventory
ChIPPA = Child-Initiated Pretend Play Assessment
CI = confidence interval
CIRP = The Children's Intervention Rating Profile
cog = cognitive
comm = communication
COO = Caring of Others scale
DD = developmental delay
dif(s) = difference(s)/different
DS = Down syndrome
dx = diagnosis
edu = education
EG = experimental group
ER = emotional regulation
ERC = Emotion Regulation Checklist
EU = emotional understanding
Excl = exclusion criteria
Exp = experimental
F = female
GAS = Goal Attainment Scales
grp(s) = group(s)
HOH = hard of hearing
hr = hour
HW = homework
I = intervention
ICB = inappropriate classroom behavior
I C ME strategy = Metacognitive SEL approach
ID = intellectual disability
IDEA = Individuals with Disabilities Education Improvement Act (2004)
Incl = inclusion criteria
info = information
IQ = intelligence quotient
IRA = Initiative Response Assessment
KAI = Kusche Affective Interview
LD = learning disability
lg = large
M = male
MBI = mindfulness-based interventions
MH = mental health
min = minute
mo(s) = month(s)
MOOSES = Multi Option Observational System for Experimental Studies
NAP = nonoverlap of all pairs
O = outcome(s)
OHI = other health impairment
OT = occupational therapy
PATHS = Promoting Alternative Thinking Strategies
PBFS-S = Problem Behavior Frequency Scales-Student Form

EASE = Everyday Arts for Special Education
EC = Empathic Concern scale
ED = emotional disturbance
PIPPS = Penn Interactive Peer Play Scale
PLS-4 = Preschool Language Scale - 4th Edition
PSI-SF = Parenting Stress Index Short Form
PSSM = Psychological Sense of School Membership
qual = qualitative
RCT = Randomized Controlled Trial
SANDI = Student Annual Needs Determination Inventory
SC = Social competence
SCED = single case experimental design
SEL = social emotional learning
sig = significant
sim = similar
SLD = specific learning disability
SLI = speech or language impairment
SLP = speech and learning pathology
SPA = Structured Play Assessment
SPED = special education
PBFS-T = Problem Behavior Frequency Scales-Teacher Form
PE = physical education
phys = physical
SPSC = Sensory Profile School Companion
SPSI = Social Problem-Solving Interview
SSIS = Social Skills Improvement System
SSRS-T = Social Skill Rating System-Teacher Version
stat = statistically
TCRS = teacher child rating scale
TEACCH = Treatment and Education of Autistic and related Communication handicapped Children
ToM = Theory of Mind
tx = treatment/intervention
VABS = Vineland Adaptive Behaviour Scales
w/ = with
WISC-IV = Wechsler Intelligence Scale for Children-Fourth Edition
WISC-R = Wechsler Intelligence Scale for Children Revised
wk(ly) = week(ly)
yo = years old
yr(s) = year(s)

Summary of Key Findings

Summary of Experimental Studies

All experimental studies analyzed the efficacy of various social emotional learning interventions in a variety of contexts including special education and/or among students with learning disabilities. Studies had mixed to positive results regarding outcome measures (Bhan & Farooqui, 2013; Kam et al., 2004; Sullivan et al., 2015; Adibsereshki et al., 2014; D'Elia et al., 2014; Milligan et al., 2016; Thompson & Johnston, 2013). Measures of interest included emotional awareness, self-regulation, social skills/social problem solving, and self-esteem/social competence/assertion vs. victimization. All treatments were associated with some measure of improvement among subjects in experimental groups. This included both increases in positive behaviors, as well as decreases in negative behaviors.

Summary of Outcome Studies

Outcome studies provided results from various social-emotional learning intervention strategies utilized with children in self-contained classrooms. Some studies used branded curricula (O'Connor et al., 2011; O'Handley et al., 2016; and Stagnitti et al., 2012) while others did not (Horowitz et al., 2016 Malboeuf-Hurtubise et al., 2017; Malboeuf-Hurtubise et al., 2018; and Miller et al., 2005). Interventions led to various positive social-emotional outcomes such as increased social interaction, progress toward goals, increased self-awareness, improved accuracy of social responses, and improved friendships (Horowitz et

al., 2016; Malboeuf-Hurtubise et al., 2018; O'Connor et al., 2011; O'Handley et al., 2016; and Stagnitti et al., 2012). There were also reductions in maladaptive behaviors as a result of the interventions, such as decreased social disruption, decreased social disconnection, decreased inappropriate classroom behaviors, decreased aggression, and fewer conduct problems (Malboeuf-Hurtubise et al., 2017; Miller et al., 2005; O'Connor et al., 2011; O'Handley et al., 2016; and Stagnitti et al., 2012).

Summary of Descriptive Studies

Descriptive data centered around examining the impact of the Second Step curriculum on the social skills and social wellbeing of students with disabilities. Researchers found that this SEL program was not effective in increasing social initiation (Machado, 2017), and there were no statistically significant results demonstrating that this curriculum increases empathy or sense of school belonging or reduces bully victimization or physical aggression (Espelage et al., 2015; Espelage et al., 2016). There is limited evidence that students with disabilities may demonstrate increase in social response and decrease bully perpetration after receiving Second Step SEL interventions (Machado, 2017). Of note, these studies do not analyze results by disability type, so this data reflects students with mild to more severe disabilities and includes both cognitive and behavioral conditions.

Implications for Consumers

Children in special education classrooms will benefit most in terms of social skills competency from interventions that are long-term and that are incorporated into a larger curricular context. Additionally, interventions focused on improving social-emotional awareness are most effective for children with learning disabilities. Parents and guardians of such children should investigate whether their child is receiving SEL education in their self-contained classroom, and advocate for curricula that are long-term and integrate well into the larger classroom culture and instruction style.

Implications for Practitioners-

Research indicates that social-emotional interventions promote positive outcomes and reduce maladaptive behaviors in self-contained classrooms. Practicing school-based occupational therapists should be collaborating with the self-contained classroom team to implement social-emotional learning interventions for students presenting with a variety of severe disabilities including, but not limited to, low IQ, low adaptive skills, visual, hearing, and cognitive impairments.

Due to the broad range of disabilities children present within the self-contained classroom, it is of key importance to select interventions that are developmentally appropriate, and that intervention be delivered in a variety of mediums including, but not limited to play, art, individual instruction, group instruction, storytelling, or structured peer interaction.

Occupational therapists have the unique ability to promote the occupation of social participation in students in self-contained classrooms, as well as promote the development of performance skills such as emotional regulation. Occupational therapists should utilize students' motivation to engage in social participation while working in self-contained classrooms. Through social-emotional learning interventions occupational therapy can facilitate student development of various social abilities and appropriate emotional expression.

Implications for Researchers

There is much research to be done on social-emotional learning strategies for students with severe disabilities. Many studies focus on the experience of students with mild or moderate disabilities, but the evidence is lacking for children with severe deficits. The inconsistency of reporting measures to define level of disability also created challenges in understanding the population studied. Indicating level of deficit would be beneficial in the application of research to real practice.

Additionally, there are limited studies conducted or administered by occupational therapists. Due to the unique role that occupational therapists can play in addressing the social emotional needs of students, it would be beneficial to have more occupational therapists on research teams for this area. Occupational therapist's holistic view of clients would add a unique perspective in research and offer a multifaceted view of the results. Occupational therapists are equipped to address the social emotional functioning of students, especially as it affects their play and relationships.

Many studies used small sample sizes and thus the power of the study is minimal and results may not be generalizable. More studies with larger sample sizes and increased heterogeneity are indicated to increase the strength and generalizability of outcomes.

The type of research studies on this subject was limited. No qualitative research studies were found on this topic. This indicates a need for further studies that aim to understand the lived experience of conducting or participating in a social emotional learning curriculum for students with severe disabilities. Finally, very few systematic reviews were found on the topic, and those that exist combined all levels of impairment, making conclusions and generalization challenging. This gap in literature indicates a need for synthesis of the current studies surrounding SEL programs for children with disabilities.

Bottom Line for Occupational Therapy Practice/ Recommendations for Best Practice

Occupational therapists need to capitalize on our potential to provide support to students with disabilities around their social participation and emotional regulation. By integrating our treatment into the self-contained classroom environment, we can support teachers in implementing social-emotional learning curriculum and interventions to promote positive outcomes and reduce maladaptive behaviors. Interventions should be developmentally appropriate and can be successful in a variety of mediums including play, art, individual or group instruction, storytelling, or structured peer interaction. There is a role for occupational therapists to fill in IEP teams regarding social-emotional development, and as a profession we must advocate to have a seat at the table.

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Involvement Plan

Our collaborator was an occupational therapist for the Puyallup School District, in which she served three elementary schools. The population she tended to serve includes students with developmental delays, cognitive disabilities, Autism Spectrum Disorders (ASD), and Down syndrome. One classroom environment in which she frequently worked was self-contained classrooms. During initial meetings with our collaborator, she shared that students in such classrooms did not receive the social-emotional learning (SEL) instruction that educators provided to students in the district's general education classrooms. This gap in service demonstrated a social disparity and denied a population of students training in an area that could have significantly increased their safety, independence, and social participation.

To address this issue, our group researched the evidence on strategies and curricula that provide social-emotional learning to children ages 3-12 years old, in classrooms serving students with severe disabilities. Through this process, we uncovered a range of intervention approaches that address SEL outcomes. One discovery that our research revealed was that the skills educators attempt to address through SEL curriculum are broad and varied; this spoke to the diverse abilities and needs of the students themselves. As such, our knowledge translation project was to create a reference guide for educators and therapists to use when addressing SEL goals with students. This guide was organized by outcomes, and shared appropriate interventions, the strength of the evidence for these outcomes, and when applicable, classroom materials to support implementation of interventions.

Contextual Factors of Knowledge Translation

We intended for our knowledge translation project to have high relative advantage, compatibility, reinvention, and trialability. Discussions with our collaborator illuminated to us

that any tools that intentionally and strategically promoted SEL within self-contained classrooms would be an improvement. Skill levels and classroom structures can differ so widely in such classrooms, any material we produced should be adaptable and modifiable. The reference guide allowed educators to pick and choose which outcomes to target through intervention and was general enough that any classroom activities can be customized. The reference guide was available as a free PDF, providing the relative advantage of not creating any expenses, unless an individual practitioner or educator chose to print physical copies. Designed to be a flexible tool, the quick reference guide allowed practitioners and educators to trial the information from any given section before choosing to adopt all of the strategies identified from the research. Each of these elements, combined with a low level of perceived risk, increased the likelihood of SEL strategies being adopted by practitioners and educators providing instruction and intervention in self-contained classrooms within the Puyallup School District.

Although there are barriers to implementation of any new tool or strategy in practice, we believed the special education team in the Puyallup School District to be ready for this change on a systems level for the following reasons. The social disparity that existed in self-contained classrooms in the district was perceived as undesirable and warranting introduction of strategies for promoting social emotional learning. As previously stated, the quick reference guide was designed to be adaptable, to increase the chance of successful application of the product within the district. The inclusion of documented research outcomes also increased the likelihood of educators implementing these strategies in their classrooms.

Tasks/Products and Target Dates

Task/Product	**Deadline Date**	**Steps w/ Dates to achieve the final outcome**
Clinical practice guidelines Creation of a quick reference SEL guide that formatted the intervention strategies found in our CAT articles into a useable format organized by SEL outcome for teachers and therapists.	Final quick reference guide planned to be done by 4/6/19	1. Each group member combed through their CAT table articles to identify the interventions and strategies used for the various SEL outcomes explored. This information, along with the article citations for further information was planned to be put into a draft word document by 3/30/19. 2. When all the articles had been revisited and the pertinent information put into the draft document, we met as a group. We discussed how best to organize the document, wrote instructions for use, and organized groups of outcomes to ensure ease of use and professionality. This was planned to take place the week of 3/31/19. 3. We then imported the text into a format that was aesthetically pleasing and professional, with table of contents, appendices, references etc. We planned to have a PDF copy as well as a printed copy for our collaborator. This part was planned be finished no later than 4/6/19.
In-service(s) for practitioners We planned to meet with Heather, and potentially other therapists and teachers to	Meeting was planned to take place by 4/12/19	Once the quick reference guide was complete, formatted, and edited we planned to reach out to Heather to set up a time to present it to her. This was planned to happen no later than 4/12/19.

explain the use of the quick reference SEL guide.		
Documenting the process of knowledge translation by the practitioners We were interested in understanding if practitioners and teachers found the quick reference SEL guide valuable, intuitive, and easy to integrate into practice. This would be accomplished through the use of an online survey with both qualitative and quantitative data collection. We didn't know the schedule of practitioners' lessons regarding SEL, so it may have been unreasonable to expect that they would use it right away. Thus, the questions were geared towards anticipated use of the guide, rather than inquiring about how they had used it already.	Survey results were planned to be in and analyzed by 4/23/19, ready to be integrated into our poster presentation.	1. Upon the presentation of our quick reference SEL guide the week of 4/7/19 we planned to let Heather and the self-contained classroom teachers know that we would be following up with an email survey to ask about their perceived usability and functionality of the quick reference SEL guide 2. The group planned to meet and select survey questions by 3/29/19. 3. A week after meeting with Heather we planned to send out a Survey Monkey by email to the practitioners and teachers that Heather identified to us. We planned to inquire about their thoughts on the product and if they have used it already or ask them to rate how likely they are to use it in the future. Survey was planned to be sent by 4/14/19. 4. We planned to send reminder emails if necessary to ensure maximum feedback from teachers and practitioners by 4/20/19. 5. The quantitative and qualitative feedback we received via the survey was planned to be analyzed and condensed to be integrated into our final poster project by 4/23/19.

Outcomes to Monitor and Evaluate

The primary goal of our knowledge translation project was to streamline the information within select SEL interventions from our CAT table into a functional format, so practitioners could more easily access and use evidence-based intervention techniques for SEL in self-contained classrooms. Ideally, we would have liked to monitor student outcomes after implementing the suggested evidence-based interventions. However, the broad nature of SEL outcomes our CAT addressed, along with the diversity of recommended dosages for intervention, prevented an organized way to record student outcomes within this project timeline. Therefore, the outcomes we were monitoring were the practitioner's perception of how usable and applicable the quick reference SEL guide was to their practice. We surveyed the teachers and occupational therapists we gave the guide to, asking them how helpful the translation of research was and how confident they were that they would use this guide. We included both quantitative and qualitative data collection methods to better understand both the effectiveness and practitioner perception of the quick reference SEL guide. The data was then be analyzed and integrated into a comprehensive poster presentation to demonstrate practitioner reactions and satisfaction with the final translation product.

Description of Activities and Products Completed

Schedule of Knowledge Translation Steps Completion	
Task/Product and Final Deadline	**Steps with Dates Achieved**
Clinical practice guidelines Creation of a quick reference SEL guide that formats the intervention strategies found in our CAT articles into a useable format organized by SEL outcome for teachers and therapists. **Final quick reference guide done by 4/6/19**	1. Each group member combed through their CAT table articles to identify the interventions and strategies used for the various SEL outcomes explored. This information was put into a draft document by **3/26/19.** 2. After all the articles were revisited and the pertinent information put into the draft document, we met as a group on **3/27/19**. We discussed how best to organize the document, wrote instructions for use, and organized groups of outcomes to ensure ease of use and professionalism. 3. We imported the text into a format that is aesthetically pleasing and professional, with table of contents, appendices, references etc. We submitted our first draft to our chair on **4/2/19**. 4. We received her feedback on **4/10/19** and turned in a revised draft on **4/14/19**. 5. We met with our chair on **4/19/19** where she gave us her final edits, which we applied, and the Reference Guide was printed on **4/22/19** for the in-service.
In-service for practitioners To offer explanation on how to use the guide and disseminate the knowledge. **Completed 4/22/19.**	We reached out to Heather on **3/25/19** to set up a time to share our product with her. She selected **4/22/19** for the meeting. We completed the in-service with our collaborator and 3 of her colleagues on that day.

Documenting the process of knowledge translation by the practitioners The use of an online survey with both qualitative and quantitative data collections helped us gather outcome data on the perceived effectiveness and value of the guide. **Survey administered to practitioners on 4/22/19.**	1. We created a survey and submitted it to our chair for approval on **3/29/19** and made revisions per her request by **4/8/19**. 2. The survey was administered at the time of in-service on **4/22/19** to increase our response rate turn around to analyze the data. 3. The quantitative and qualitative feedback we received via the survey was analyzed and integrated into our final paper and poster project by **4/23/19**.

Quick Reference Guide

For a complete copy of the quick reference guide, see *Appendix A*. The primary challenges we faced when developing our quick reference guide were how to organize it, which content to prioritize, and ensuring compliance with copyright laws. Our research yielded a host of outcomes with overlapping terminology and a range of breadth in their focus. To address this organizational challenge, we incorporated feedback from our project chair on use of the CASEL core competencies for SEL outcomes. We then read descriptions of these competencies available through CASEL's online resources to sort the statistically significant outcomes from the literature. This approach helped us develop a framework to organize our guide and provide greater structure to practitioners using the guide. Because some curricula positively affected multiple SEL outcomes, we realized that some text describing interventions would be repeated throughout multiple outcome sections. This repetition posed another challenge to organization and usability of the guide, which we addressed by writing a section outlining how practitioners should use the guide.

Another challenge we faced when creating the quick reference guide was determining what content to include. We decided to focus just on those outcomes deemed statistically significant by the research, as we only wanted to encourage use of interventions and approaches that were shown to be effective. We recognize that many widely used and respected SEL curricula are not included in this guide. However, lack of research on the effect of these curricula on our population of interest prevented us from incorporating these interventions. Additionally, we considered the needs of our audience. Though practitioners would likely appreciate the option to access the research directly, we reasoned that their main motivation would be to find specific interventions that they could apply in their practice setting. To address this need, we included references to the research, but focused the bulk of the text on specific application of the intervention, including dosage, overview of activities, and links to relevant SEL resources. In a few cases, this required contacting researchers directly to better understand the interventions themselves or find ways to access content and materials.

The last challenge we faced pertained to use of images from CASEL for our reference guide. To include a quick way to indicate which core competency each outcome fell under, we had considered modifying an image from CASEL's website. However, group discussion brought up the copyright issues inherent with this approach. We contacted our department librarian and the CASEL office to identify whether use of these images would indeed be prohibited. Through these conversations we confirmed that we could use the CASEL images as long as we cited them and only used them in their original form.

In-service for Practitioners

We were delighted to receive an invitation from our collaborator to present our work to her and a few of her colleagues involved in developing a support center in one of her schools. To

prepare for this in-service, we collaboratively determined how to organize the presentation, using advice from our course lecture notes to do so. We split up the in-service into four sections so that we could each practice how to communicate our process in developing our research topic, create the CAT table, and produce the quick reference guide. A challenge in our delivery of the in-service was timing. Using backwards planning to build in time to create the reference guide, allow our chair time to review it, schedule time to meet with our chair, and measure performance outcomes in time to create our poster, we discovered that we would have just a one to two-week period to meet with our collaborator. Unfortunately, that window fell during the Puyallup School District Spring break. To work around this limitation, we decided to administer our outcome survey at the end of our in-service instead of electronically after giving practitioners time to review the guide. During the in-service we allotted time for the practitioners to explore the reference guide, ask questions, and complete the survey that we created. Fortunately, this ended up being a better approach, as we got higher return rates of surveys than we likely would have if we had emailed them, and we had enough time during the in-service to allow practitioners to peruse the quick reference guide, make comments, and ask questions. For a complete copy of the outcome survey, see *Appendix B.*

Outcomes and Effectiveness

Outcomes Monitoring

We were interested in understanding the first impressions of various stakeholders regarding the quick reference guide as a tool to help select evidence-based intervention approaches to SEL. To track this outcome, we created a survey to be taken after reviewing the quick reference guide. We wanted to discover if practitioners, teachers, and other members of the education team found the guide valuable, intuitive, and potentially easy to integrate into practice. The online survey consisted of both qualitative and quantitative data collection. We included demographic questions concerning the respondents' position of employment and how they interact with SEL or students in self-contained classrooms. This helped us gauge who was interested in the reference guide. We also assessed what SEL priorities they have and their perceived need for SEL curricula in the classroom. Part of the survey addressed respondents potential use of our quick reference guide and what they hope to gain from it. Finally, the survey asked respondents to rate their perceived ease of use of the reference guide and their likelihood of using it. There was space for respondents to voice any concerns they have with the guide as well.

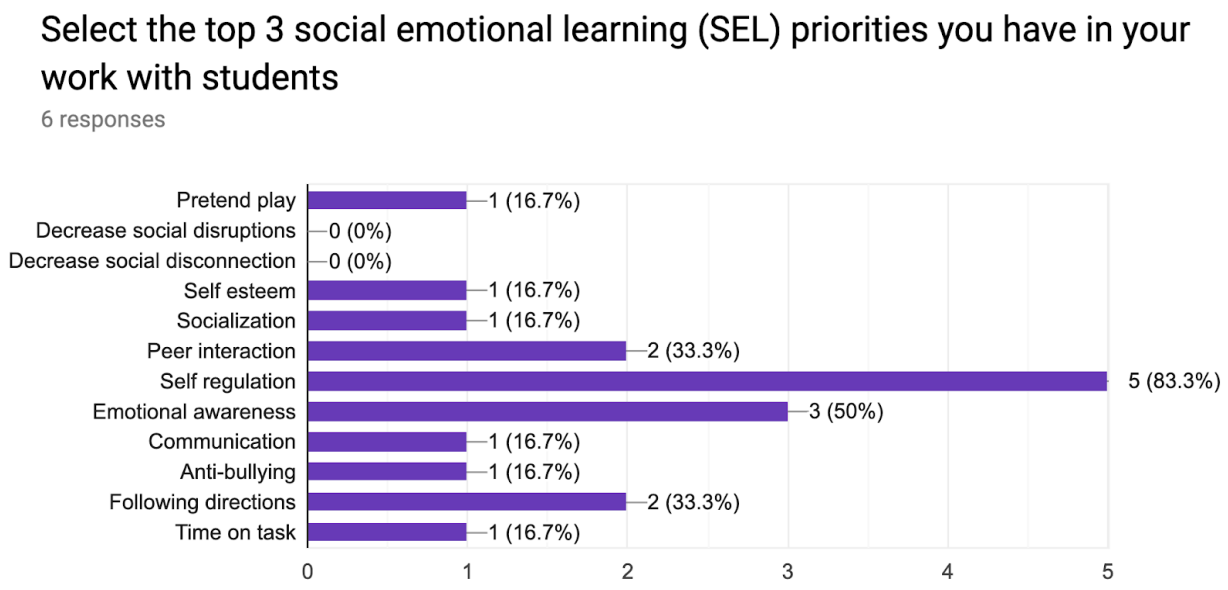
As the survey was administered immediately after exposing the participants to the guide, the questions were geared towards anticipated use of the guide rather than inquiring about how they have used it already. Additionally, because our in-service occurred later than expected, we needed to have gathered outcome data fairly quickly after the in-service to analyze. For these reasons the survey was administered directly after the in-service.

Outcomes Monitoring Results:

Everyone who attended the in-service also completed the survey, as well as two additional occupational therapists not in attendance. Overall, we had six respondents consisting of three occupational therapists, a speech language pathologist, a resource room teacher, and a school principal. Five out of six respondents had viewed the quick reference guide before filling out their response. Respondents reported working with a variety of aged children from pre-k to 9th grade, and half of the survey respondents reported they work with students in self-contained classrooms. 66% of respondents felt SEL was a high need for self-contained classrooms in their district, 33% felt there was a moderate need, and none found no need for SEL.

When asked to select the SEL outcome priorities that practitioners have, the most frequently chosen SEL outcome was self-regulation, with 83% of respondents selecting this option. Other frequently selected outcomes included emotional awareness (selected by 50% of respondents), peer interaction and following directions (both selected by 33% of respondents). See Figure 1 for full breakdown of question results. For respondents that had a chance to overview the guide, we asked questions regarding potential usability. Using a 5-point Likert scale, 80% of respondents rated both the guide's ease of use and potential value at either a 4 or 5.

Figure 1



Survey respondents' data on top SEL priorities in their practice

Respondents were asked what they hope to gain from use of the quick reference guide; their qualitative responses can be organized into the following themes: familiarity with available research, education tool, time saver, and treatment ideas. **Familiarity with Available Research:** Three respondents mentioned how the quick reference guide would help make evidence-based approaches available to them in the classroom in a direct, and understandable format. **Education Tool:** Several responses commented on how this guide would be a useful tool for teaching SEL concepts and group-based learning. **Time Saver:** A majority of respondents commented on how this guide would save a significant amount of time on researching best practice for several SEL outcomes. **Intervention Ideas:** Many respondents felt the reference guide could aid them in selecting specific treatment approaches.

When respondents were asked to voice concerns or additional comments, their qualitative responses can be broken down into three themes as follows: intervention categorization,

procedures/methodologies, and strategies for successful implementation. **Intervention Categorization:** Two respondents suggested the guide organize interventions and programs by student chronological age, developmental status, and/or diagnosis. **Procedures/Methodologies:** Two respondents recommended that specific activities for interventions be elaborated upon. Activity analyses and appropriate grading for each intervention were also suggested. **Strategies for Successful Implementation:** One respondent explained that the school district in which they worked would need to review and approve of any curriculum purchased for use by educators. The respondent suggested providing greater detail in outlining strategies in for-profit intervention materials for better implementation without purchase.

The limited number of respondents necessitates care when drawing conclusions. Overall, we were not able to reach our target audience to the fullest extent possible, as only 50% of respondents worked with students in self-contained classrooms. The feedback regarding the guide is helpful and informative to future projects and research. When asked to list SEL outcome priorities, the answer options included all 12 SEL outcomes addressed in the guide and supported by our research. Respondents selected 10/12 SEL outcome areas as priorities in their current work, demonstrating that the guide would be helpful in addressing practitioners' actual need. Our survey also found that the respondents identified a high need for SEL in self-contained classrooms and upon preliminary reading of the guide, they perceived it would be moderately to very easy to use, moderately valuable and rated themselves as moderately to very likely to use the guide. Overall the survey data revealed a positive trend of ratings and qualitative feedback from respondents and a good match of SEL outcomes addressed in the quick reference guide to needs identified by practitioners.

Evaluation of the Overall Process of Project

Our experience completing this evidence project has been collaborative, informative, and presented us with a just-right challenge. We are grateful for the opportunity to engage in this experience, and proud of the hard work and dedication we put into the process in order to produce our CAT and knowledge translation projects.

Contributions from each of our student members, our research collaborator, our project chair, and our project mentor have created a collaborative team since the inception of this project. This collaboration facilitated the development of both our CAT and knowledge translation projects in a way that allowed for each member to contribute their individual knowledge, strengths, and insight to produce collectively created and worthy final products.

Through participating in this evidence project, we have gained a deeper understanding of the research and publication process that will inform our future engagement with research as consumers, practitioners, and potentially as future researchers. We have become more aware of the amount of work that goes into the beginning stages of developing a research question, considering inclusion and exclusion criteria, conducting a systematic search of the literature to try and answer that question, and analyzing and dissecting the uncovered literature to detect themes and highlight statistically significant outcomes. Furthermore, translating those findings into a usable product for our research collaborator has provided us with further insights into the implications and demands of turning research into evidence-based practice.

This experience has been challenging in many ways but facing and working through those challenges has led to positive outcomes and pride in our work. The demands of our coursework related to this experience have pushed us to produce high quality work and expand our knowledge and comfort with research. The support of our project chair and mentor have

scaffolded us to build upon our foundational knowledge to accomplish and create products we may not have originally believed we were capable of. As a team, we have supported one another, and held each other accountable. This has required communication, organization, and delegation of tasks in order to manage workload and meet deadlines. We have had to be flexible, adapting to individual schedules and availability, as well as to information and demands that arose as the process unfolded.

This evidence project has become the product of countless hours of work and we are truly proud of what we have accomplished. At times throughout this process we have felt intimidated, anxious, and apprehensive; but we have ultimately felt accomplished. Our collaborator's first impression of our final knowledge translation project was that it will be usable and valued in her school-based practice, giving us the impression that through our teamwork, we have achieved what we set out to do.

Recommendations for the Future

There are some recommendations that stem specifically from the results of our practitioner survey. The individuals who responded to our survey indicated self-regulation, emotional awareness, and peer interaction as the top three social-emotional learning competencies they address in their work with students. Future student projects may investigate these three competencies on a deeper level in order to provide practitioners and educators with more in-depth information relating to these priorities.

While conducting our search of the literature it became apparent that the majority of research that has been conducted on SEL in schools has been with populations that exclude self-contained classrooms or students with severe disabilities, or simply does not report on these populations. This gap in the literature may be indicative of disparity between the general education population and students enrolled in self-contained classrooms or having diagnoses of severe disability. There are many SEL interventions available for purchase by districts and schools, but what we found was that the research on those programs did not indicate outcomes for our population of interest. Many widely used and respected SEL curricula are not included in the reference guide we created due to a lack of research on the efficacy for these curricula on our population of interest. This lack of research prevented us from incorporating these interventions. Future research should fill these gaps by evaluating the efficacy of use of such programs in self-contained classrooms or students with severe disabilities.

As more schools move toward inclusion of students with disabilities, it is imperative that there is research available to guide decision making for providing SEL interventions to students with all levels of abilities. Through this research process, many intervention approaches that address SEL outcomes were uncovered. These varied interventions address broad SEL skills

which educators are attempting to focus on; which speaks to the diverse abilities and needs of the students themselves. Interventions that are easily modifiable are more likely to meet the individual needs and goals of individual students. Many schools and districts are shifting SEL interventions from individually tailored programming to Tier 1 programming. Considerations must be made to ensure that all students can participate in and benefit from Tier 1 programs as they become more prevalent.

Occupational therapists working in school-based practice settings should advocate for both their students and their roles and scope of practice. Students with severe disabilities need members of their IEP team, including occupational therapists, to advocate for their rights as students to receive equitable education including SEL. Traditionally, occupational therapists working in school-based practice settings have not addressed SEL. However, these practitioners do have a role in SEL and should advocate to their school administrators to include this role in their scope of practice.

Reference

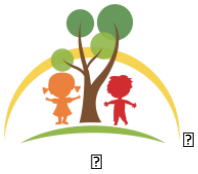
CASEL. (2019). *What is SEL?* Retrieved March 27, 2019, from https://casel.org/what-is-sel/

Appendix A: Quick Reference Guide

Social Emotional Learning

A Quick Reference Guide for Instruction

Amelia Jones, OTS; Paige Kensil, OTS; Jared Peltzman, OTS; Erica Petru, OTS
University of Puget Sound
2019



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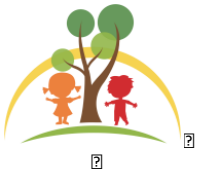
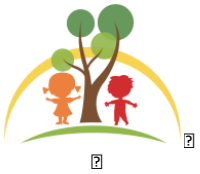




INTRODUCTION TO THE QUICK REFERENCE GUIDE

The following reference guide is intended to aid stakeholders in selecting an evidence-based approach to social-emotional learning (SEL). Stakeholders include teachers, occupational therapists, school counselors, paraeducators, or any professional working to further children's SEL.

The intervention approaches and programs suggested in this guide were found through extensive literature review of the following databases and sources: American Journal of Occupational Therapy, PubMed, OT Search, ERIC, UW libraries Advanced Search, PsychINFO, and Primo Search Collins Memorial Library. SEL strategies were only included in this guide if the research was specifically about children ages 3-12 years old with a severe disability or who were currently being taught in self-contained classrooms. Additionally, only studies that found a statistically significant impact on SEL outcomes were included in the guide.

HOW TO USE THE GUIDE

1. Identify the SEL outcome you would like to target for the student or self-contained classroom by looking through the table of contents at the various SEL outcomes addressed in this guide.
2. Read through the evidence-based approaches to teaching the selected SEL outcomes that are outlined in that section of the guide.
3. Consult the "**Resources**" at the end of the selected SEL strategy to get ideas and materials for implementing the chosen SEL intervention approach.
4. Alternatively: If you are looking to implement a SEL program or curricula that is evidence-based and addresses a range of SEL concepts, refer to the "**Evidence-Based SEL Curricula and Programs**" section. Here you can read through short descriptions of all the manualized interventions and programs found through the literature search. You will also find links to additional resources and information regarding these programs.

DISCLAIMER

The contents of the guide represent the scope of available evidence at the time of compilation. To access the current evidence-based SEL intervention strategies available, stakeholders should consult the most recent research.

INTRODUCTION TO SOCIAL EMOTIONAL LEARNING

SEL is a complex and multifaceted skillset influenced by many factors. According to the Collaborative for Academic, Social, and Emotional Learning (CASEL), "SEL is the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions" (CASEL, 2019). Students in self-contained classrooms tend to experience challenges with this type of awareness, due to frustration at the stigma surrounding their disability status, comorbidities of specific diagnoses which impact social-emotional development, and cognitive or learning challenges.

CASEL is an organization that provides resources and research to direct policy, and aims to support districts, schools and states on implementation of SEL. They have created a framework for understanding and categorizing types of SEL competencies and the influences that impact these skills. Five categories of competencies have been identified and are outlined in the infographic below. The two orange competencies address intrapersonal skills in relation to the self, whereas the two green competencies address interpersonal skills related to others. Further detailed descriptions of CASEL SEL competencies can be found in Appendix A. This reference guide has organized SEL outcomes by CASEL SEL competencies. For more information, visit https://casel.org

Figure 1. Core SEL Competencies from "CASEL" by CASEL, 2019. https://casel.org/core-competencies/

EVIDENCE-BASED SEL CURRICULA AND PROGRAMS

LEARN TO PLAY INTERVENTION

The Learn to Play therapy intervention was created by an occupational therapist with the aim of encouraging spontaneous solitary and social pretend play (Stagnitti, 2019). Pretend play skills impact many areas of child development including; language, social interaction and emotional integration of experiences. The Learn to Play therapy uses structured and unstructured play sessions with the therapist and peers to encourage the development of play skills. When used in specialized classrooms, this intervention has significantly improved both language and social skills. More information on the program as well as assessments for play and resources for parents, therapists, and teachers are available at; https://www.learntoplayevents.com/about/.

EVERYDAY ARTS FOR SPECIAL EDUCATION (EASE)

EASE is a research-based program designed to help students attain social, academic, and IEP goals through arts-integrated curricula and strategies (Urban Arts Partnership, 2019). Preliminary outcomes showed increases for elementary school children with disabilities in both socialization and communication, following two years of integrating EASE into the self-contained classroom. Professional development resources, downloadable curricula, and classroom lesson plans can all be found at http://easelms.urbanarts.org/.

PROMOTING ALTERNATIVE THINKING STRATEGIES (PATHS®) CURRICULUM

PATHS® is a comprehensive, preventative intervention program that fosters and encourages self-regulation, social skills competencies, and active problem solving among children (Kusche, 2000). It is based on the Affective Behavioral Cognitive Dynamic (ABCD) Model of Psychosocial Development Theory. Some studies simplified and/or modified the curriculum of this program for students with a variety cognitive or learning disabilities in self-contained classrooms, with moderate success (Kam et al., 2004). For more information, visit:

http://www.pathstraining.com/main/ or https://www.channing-bete.com/prevention-programs/paths/paths.html.

MINDFUL SCHOOLS

Mindful Schools is an organization dedicated to integrating mindfulness into everyday learning in K-12 schools (Mindful Schools, 2019). Their website includes information about mindfulness,

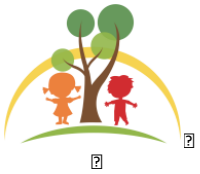
courses, videos, and classroom resources. Benefits of mindfulness include improved attention, emotional regulation, adaptability, compassion, calming, and resilience. For more information, visit: https://www.mindfulschools.org

SECOND STEP®: STUDENT SUCCESS THROUGH PREVENTION (SS-SSTP)

Second Step® offers a suite of SEL curricula that span pre-Kindergarten through 8th grade and can be implemented school wide, districtwide, or on a community level (Committee for Children, 2019). Multiple bundle options are available through the program, including multimedia classroom kits and specific units on Bullying Prevention and Child Protection. This guide found statistically significant data to support the use of Bullying Prevention curricula in middle school classrooms. More information can be found at: https://www.secondstep.org/.

ACES SOCIAL COMPETENCE GROUP PROGRAM

The Awareness, Competence, Engagement & Skills (ACES) Social Competence Group Program has previously been shown to be effective among children struggling with comorbid learning disability (LD) and mental health (MH) challenges (Child Development Institute, 2019). Children vigorously assessed, and divided into smaller groups based on age, gender, and developmental stage/severity of challenges in both emotional regulation and social competence. Interventions address social problem solving, social competence, cooperation, and emotional regulation/self control. This intervention was performed at the Toronto, Canada-based Child Development Institute. For more information on this facility, please visit http://www.childdevelop.ca/ and for a handbook on the ACES Program's approach to children with a variety of different LD and MH challenges, follow the proceeding link: http://childdevelop.ca/sites/default/files/files/Sept%2022%20Integra%20LDMH%20Handbook%202016.pdf



SELF-ESTEEM

DESCRIPTION OF SEL OUTCOME

Self-esteem involves students' internal level of value they place on themselves, their abilities, and their emotional states of being. Having appropriate self-esteem is an essential component to successful SEL.

CASEL Competency: Self-Awareness

METHODS OF INSTRUCTION

ARTS-BASED INTERVENTION

One study found the use of arts-based interventions, by way of Everyday Arts for Special Education (EASE), to have a significant effect on this SEL outcome (Horowitz, 2016). The arts-based intervention included the use of music, dance, visual arts, and theatre, as well as verbal, artistic, and kinesthetic domains of communication. The objective of all EASE activities was to learn various "rules" (such as social rules, or classroom rules) in a fun and engaging way. Teaching these rules through the arts and play turned these complex SEL concepts into a game.

WHAT

All interventions and lesson plans involved the following approaches:

- Incorporation of fun/enjoyment
- Partnering/collaboration (peer-to-peer and teacher-student capacities)
- Cooperative play (non-competitive, no winners and losers)
- Students making choices
- Students as leaders
- Process trumping product

SUGGESTED DOSAGE

In the schools where the EASE program was implemented, researchers used groups of 6-12 students. The arts component of the intervention was implemented in the classroom for two years before outcome measures were analyzed. Student SEL outcomes significantly increased within this timeframe (Horowitz, 2016).

RESOURCES

The EASE program was implemented through grant funding from the State of New York, and in conjunction with the Urban Arts Partnership. Teachers and therapists can request free access to the online courses to be trained in EASE via their website at: http://easelms.urbanarts.org/courses/. A wide range of curricula, training guides, classroom handouts, and lesson plans can be downloaded for free at: http://easelms.urbanarts.org/curriculum/.

METHODS OF INSTRUCTION

ACES SOCIAL COMPETENCE (SC) GROUP PROGRAM

The Awareness, Competence, Engagement, & Skills (ACES) Social Competence (SC) Group Program (Milligan et al., 2016) has shown promise in improving social skills competencies of children with comorbid learning disabilities and mental health challenges.

WHO

Two Masters-level psychologists implemented this program. The therapists occasionally collaborated with case managers and parents to develop individual and group social competency goals.

WHAT

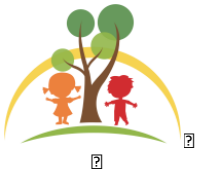
This program consists of 3 smaller groups of children (average age of 11.4 years) specifically tailored for differences in age, gender, level of social competence, and level of emotional regulation.

- "Social competence" is defined as a child's means of being able to successfully and independently initiate meaningful social interactions, acknowledge and tolerate others, actively participate in group activities, and benefit from sustained social interactions.
- "Emotional regulation" covers a number of lower level skills, including self-control, ability to follow direction or prompting, and adherence to group structure and dynamics. Children with lower emotional regulation were placed in smaller groups (dyads or triads) with a greater emphasis on foundational social skills.

Group sessions involved a wide range of activities and games designed to foster greater social skills, cooperation, and confidence. These were adjusted to a given group's level of social competence and emotional regulation. For lower level groups, activities focused on basic social skills such as turn taking, acknowledging others, and making eye contact, along with more direct instruction and scaffolding from the leading therapists. For more advanced groups, there was a greater element of "in the moment" teaching during group activities, promoting perspective-taking, understanding one's impact on peers, and social problem solving (Milligan et al., 2016).

SUGGESTED DOSAGE

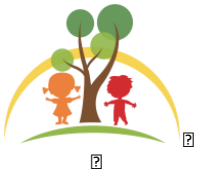
Each group met 1 hour weekly for 9-10 weeks following 2 weekly assessment sessions to determine group placement. Following the 10 weeks, significant gains in goal-directed initiations were observed through coded observations, as well as significant increases in assertion and engagement social skills on the parent-rated SSIS questionnaire (Milligan et al., 2016). Qualitative interviews with children, parents and teachers also supported an



improvement in goal directed initiation, social self-concept, and emotional regulation. Students can be enrolled in consecutive groups with anticipated gains in social competence and emotional regulation skills, over the course of the school year.

RESOURCES

For more information on various intervention strategies for children with different forms and severities of comorbid LD and MH challenges, refer to the following Integra SC Group Program Handbook:
http://childdevelop.ca/sites/default/files/files/Sept%2022%20Integra%20LDMH%20Handbook%202016.pdf



EMOTIONAL AWARENESS

DESCRIPTION OF SEL OUTCOME

This skill is defined by a student's ability to comprehend their own internal emotional state, as well as those of their peers, within a larger social context. Greater development of social-emotional awareness is correlated with countless of benefits for childhood development, including increased confidence, cooperation, and peer acceptance.

CASEL Competency: Self-Awareness

METHODS OF INSTRUCTION

ICME STRATEGY

Metacognitive ICME Strategy- This intervention stands for (1) Identification of the Emotions, (2) Controlling the Emotions, & (3) Management & Expression of the Emotions. It demonstrated a positive impact on levels of emotional comprehension among 15 students, aged 9-12, all with learning disabilities and social-emotional challenges.

WHO

The researchers developed and administered this intervention, as well as a pre/posttest known as the "Test on Emotional Understanding" (Bahnı & Farooqui, 2013) to measure changes in student social-emotional understanding. This test consists of 3 sub-parts (A, B, and C) focusing on pictorial emotional understanding, verbal emotional understanding, and emotional expression, respectively.

WHAT

Each intervention session focused on 6 emotions (anger, excitement, embarrassment, love, jealousy, and anxiety), with 5 components designed to interpret and process each emotion, all of which utilized the ICME Strategy. These were as follows:

- Color Assignment & Discussion: After being presented with an emotion, the student visually associates a color with the emotion, as well as a verbalized discussion of the emotion's deeper meaning.
- Vocabulary: The student creates a list of synonyms or associated words and terms for the emotion in question.
- Imagery: The student analyzes a picture of a specific situation and discusses the emotion(s) that come to mind with the given image.
- Reading: The student reads a story and interprets how the emotion(s) in this scenario may develop or come into play.

- Personalization: Accounts from each student are shared, of situations in which they may have experienced the emotion in question, and how they reacted at the time.
- Regulation/Redirection: Discuss more appropriate and/or efficient ways to express the emotion among peers.

Sessions were implemented at the classroom level, with a custom booklet providing these intervention guidelines with examples for each of the 6 emotions.

SUGGESTED DOSAGE

ICME Strategy-This intervention was provided to students a total of 8 times, with 45 minutes per session. There were statistically significant increases in students' overall levels of emotional understanding, among recipients of the experimental ICME intervention, as well as within all 3 subdomains of the "Test of Emotional Understanding" (Bhan & Farooqui, 2013).

METHODS OF INSTRUCTION

PATHS® CURRICULUM

PATHS® Curriculum "Feelings" Unit 35 lessons with an emphasis on teaching greater social-emotional understanding. Emotions are taught in a developmentally hierarchical order, with more basic emotions preceding more complex ones. Children are taught greater acceptance of all emotional states, while learning to better regulate associated behaviors. One of the primary goals of this unit is to recognize and label different emotions within oneself and among others (Kam et al., 2004). This is accomplished through two explicit generalization techniques, described below.

WHO

This curriculum was administered by special education teachers, who received a series of PATHS® training workshops prior to introducing their students to the series of modules that make up PATHS®.

WHAT

- Feeling Faces: Students create their own "Feeling Faces" for each emotion and store them in a personal "Feelings Box." Each student's desk contains a slot to place the face they are feeling at the moment, with the term, "I'm feeling…" preceding it. The teacher also has a Feeling Box and Faces to model this, and learning is reinforced during transitions throughout the course of the school day to promote greater generalization.

- Control Signals Poster – Modelled after the motion of traffic light signals, with red/stop equating to calming down, yellow/slow down associated with thinking, and green/go associated with trying a plan. At the bottom of the poster, is the phrase "Evaluate-How Did My Plan Work?" Students are progressively taught different signals of the poster as a tangible way to learn emotional regulation.

SUGGESTED DOSAGE

This intervention was taught to students in self-contained classrooms three times per week, for a duration of 20-30 minutes a lesson, and continuing for 10-12 weeks. These lessons were linked with a statistically significant difference for range of vocabulary to describe negative emotions and use of such vocabulary, with students who received the intervention having a greater ability to express negative emotions. There also existed a statistically significant difference between groups, regarding the rate of teacher reported externalized behaviors. While the control group had an increase in such behaviors, the treatment group had experienced significant decreases in such phenomena (Kam et al., 2004).

RESOURCES

Further resources can be found at: http://www.pathstraining.com/main/ & https://www.channing-bete.com/prevention-programs/paths/paths.html. Please call The Channing Bate Company™ at 1-800-477-4776 to find prices and place orders for the "Feelings" Emotional Understanding posters and other media.

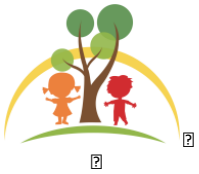
METHODS OF INSTRUCTION

ACES SOCIAL COMPETENCE (SC) GROUP PROGRAM

The Awareness, Competence, Engagement, & Skills (ACES) Social Competence (SC) Group Program (Milligan et al., 2016) has shown promise in improving social skills competencies of children with comorbid learning disabilities and mental health challenges.

WHO

Two Masters-level psychologists implemented this program. The therapists occasionally collaborated with case managers and parents to develop individual and group social competency goals.



WHAT?

This program consists of 3 smaller groups of children (average age of 11.4 years) specifically tailored for differences in age, gender, level of social competence, and level of emotional regulation.

- "Social competence" is defined as a child's means of being able to successfully and independently initiate meaningful social interactions, acknowledge and tolerate others, actively participate in group activities, and benefit from sustained social interactions.
- "Emotional regulation" covers a number of lower level skills, including self-control, ability to follow direction or prompting, and adherence to group structure and dynamics. Children with lower emotional regulation were placed in smaller groups (dyads or triads) with a greater emphasis on foundational social skills.

Group sessions involved a wide range of activities and games designed to foster greater social skills, cooperation, and confidence. These were adjusted to a given group's level of social competence and emotional regulation. For lower level groups, activities focused on basic social skills such as turn taking, acknowledging others, and making eye contact, along with more direct instruction and scaffolding from the leading therapists. For more advanced groups, there was a greater element of "in the moment" teaching during group activities, promoting perspective-taking, understanding one's impact on peers, and social problem solving (Milligan et al., 2016).

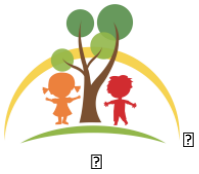
SUGGESTED DOSAGE?

Each group met 1 hour weekly for 9-10 weeks following 2 weekly assessment sessions to determine group placement. Following the 10 weeks, significant gains in goal-directed initiations were observed through coded observations, as well as significant increases in assertion and engagement social skills on the parent-rated SSIS questionnaire (Milligan et al., 2016). Qualitative interviews with children, parents and teachers also supported an improvement in goal directed initiation, social self-concept, and emotional regulation. Students can be enrolled in consecutive groups with anticipated gains in social competence and emotional regulation skills, over the course of the school year.

RESOURCES?

For more information on various intervention strategies for children with different forms and severities of comorbid LD and MH challenges, refer to the following Integra SC Group Program Handbook:

http://childdevelop.ca/sites/default/files/files/Sept%2022%20Integra%20LDMH%20Handbook%202016.pdf?



SELF-REGULATION

DESCRIPTION OF SEL OUTCOME

Self-regulation is the key to developing a plethora of additional social-emotional skills. Additionally, development of greater self-regulatory skills may not be possible without first acquiring self-control. Self-regulation includes the ability to manage emotions, thoughts, and behaviors.

CASEL Competency: Self-Management

METHODS OF INSTRUCTION

PATHS® CURRICULUM

The "Turtle" Self-Control Unit of PATHS® Curriculum is a series of lessons designed to teach and reinforce behavioral restraint through the use of the "Turtle Technique." This typically involves the gradual introduction of a metaphorical story about a turtle who experiences social and academic challenges and the resulting difficulties that arise because they "do not stop and think," (Kam et al., 2004). The turtle is taught by a wiser old turtle greater self-control by "doing turtle" through arm folding and 3 simple steps to calm down:

1) Telling yourself to stop
2) Taking one long, deep breath
3) Stating the problem and how you feel about it

This is then followed by a teacher led discussion on dealing with problematic social scenarios and their associated feelings.

WHO

This curriculum was administered by special education teachers, who received a series of PATHS® training workshops beforehand. Other professionals were not included in this study, but the sessions could be administered by others if they have received the requisite training.

WHAT

Lessons included a direct and short-term reinforcement/reward system, with both social praise and material prizes (Turtle Stamps) which was faded over time beginning in the second or third week. This system was tailored to the dynamics of each

classroom. Greater generalization was encouraged through recommendations to use the Turtle Technique in a variety of scenarios as a means to stop and think.

SUGGESTED DOSAGE

Research into this program supported an average frequency of 3 times a week, 20-30 minutes long, for approximately 5-6 weeks (Kam et al., 2004). The benefits of this intervention are clear as Kam et al. (2004) found that there was a significant increase in the proportion of avoidant, non-confrontational social problem-solving behaviors, indicating a correlation with increasing self-restraint and control.

RESOURCES

Further resources can be found at: http://www.pathstraining.com/main/ & https://www.channing-bete.com/prevention-programs/paths/paths.html. Please call the Channing Bate Company™ at 1-800-477-4776 to find prices and place orders for the "Turtle" Self-Control posters and other media.

METHODS OF INSTRUCTION

ACES SOCIAL COMPETENCE (SC) GROUP PROGRAM

The Awareness, Competence, Engagement, & Skills (ACES) Social Competence (SC) Group Program (Milligan et al., 2016) has shown promise in improving social skills competencies of children with comorbid learning disabilities and mental health challenges.

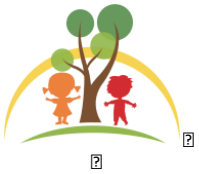
WHO?

Two Masters-level psychologists implemented this program. The therapists occasionally collaborated with case managers and parents to develop individual and group social competency goals.

WHAT

This program consists of 3 smaller groups of children (average age of 11.4 years) specifically tailored for differences in age, gender, level of social competence, and level of emotional regulation.

- "Social competence" is defined as a child's means of being able to successfully and independently initiate meaningful social interactions,



acknowledge and tolerate others, actively participate in group activities, and benefit from sustained social interactions.

- "Emotional regulation" covers a number of lower level skills, including self-control, ability to follow direction or prompting, and adherence to group structure and dynamics. Children with lower emotional regulation were placed in smaller groups (dyads or triads) with a greater emphasis on foundational social skills.

Group sessions involved a wide range of activities and games designed to foster greater social skills, cooperation, and confidence. These were adjusted to a given group's level of social competence and emotional regulation. For lower level groups, activities focused on basic social skills such as turn taking, acknowledging others, and making eye contact, along with more direct instruction and scaffolding from the leading therapists. For more advanced groups, there was a greater element of "in the moment" teaching during group activities, promoting perspective-taking, understanding one's impact on peers, and social problem solving (Milligan et al., 2016).

SUGGESTED DOSAGE

Each group met 1 hour weekly for 9-10 weeks following 2 weekly assessment sessions to determine group placement. Following the 10 weeks, significant gains in goal-directed initiations were observed through coded observations, as well as significant increases in assertion and engagement social skills on the parent-rated SSIS questionnaire (Milligan et al., 2016). Qualitative interviews with children, parents and teachers also supported an improvement in goal directed initiation, social self-concept, and emotional regulation. Students can be enrolled in consecutive groups with anticipated gains in social competence and emotional regulation skills, over the course of the school year.

RESOURCES

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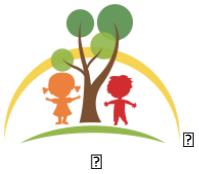


TIME ON TASK

DESCRIPTION OF SEL OUTCOME

The ability to stay focused on a specific task is an important component of SEL. Children who are unable to attend to a task may not have adequate learning opportunity to grow more complex social skills. The ability to attend to tasks, especially a non-preferred task, is an important cornerstone of SEL.

CASEL Competency: Self-Management

METHODS OF INSTRUCTION

ARTS-BASED INTERVENTION

One study found the use of arts-based intervention, Everyday Arts for Special Education (EASE), to have a significant effect on this SEL outcome (Horowitz, 2016). The arts-based intervention included the use of music, dance, visual arts, and theatre, as well as verbal, artistic, and kinesthetic domains of communication. The objective of all EASE activities was to learn various "rules" (such as social rules, or classroom rules) in a fun and engaging way. Teaching these rules through the arts and play turned these complex SEL concepts into a game.

WHAT

All interventions and lesson plans involved the following approaches:

- Incorporation of fun/enjoyment
- Partnering/collaboration (peer-to-peer and teacher-student capacities)
- Cooperative play (non-competitive, no winners and losers)
- Students making choices
- Students as leaders
- Process trumping product

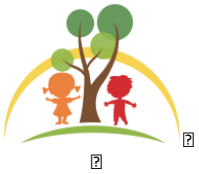
SUGGESTED DOSAGE

In the schools where the EASE program was implemented, they used groups of 6-12 students. The arts component of the intervention was implemented in the classroom for two years before outcome measures were analyzed. Student SEL outcomes significantly increased (Horowitz, 2016).

RESOURCES

The EASE program was implemented through grant funding from the state of New York, and in conjunction with the Urban Arts Partnership. Teachers and therapists can request free access to the online courses to be trained in EASE via their website at: http://easelms.urbanarts.org/courses/. A wide range of curricula, training guides, classroom

handouts, and lesson plans can be downloaded for free at: http://easelms.urbanarts.org/curriculum/.



DECREASE SOCIAL DISRUPTIONS

DESCRIPTION OF SEL OUTCOME

Some behaviors must be decreased in order to engage in peer interaction and SEL. According to the Penn Interactive Peer Play Scale (PIPPS), social disruptions are any aggressive or antisocial behaviors. It is important to mitigate these social disruptions to encourage and increase social play and SEL (O'Connor & Stagnitti, 2011).

CASEL Competency: Self-Management

METHODS OF INSTRUCTION

PLAY-BASED INTERVENTION

A play-based intervention called Learn to Play was an effective means of decreasing social disruptions for 5-8-year-old children in a specialized classroom (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012). The intervention aimed to help children develop play skills similar to their expected developmental level. Additional information on Learn to Play is located in the resources on page 16.

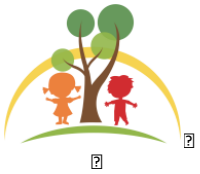
WHO

Teachers, occupational therapists and speech language pathologists administered the intervention in two studies (O'Connor & Stagnitti, 2011, Stagnitti et al., 2012). The professionals were trained in the Learn to Play program before administering the intervention.

WHAT

Four play stations were used in two studies to encourage growth in different areas of pretend play (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012). Therapists were there to help guide play. Play stations frequently overlapped, allowing for repetition with variation. Play scripts were embedded in the general class curriculum throughout the week, allowing for mass practice.

- Doll play: Feeding dolls, changing diapers, putting dolls to bed, and similar caring roles.
- Transport play: Trains and train tracks, car play with roads and houses, trucks in a sandbox.
- Construction play: Use of bricks, Legos, Duplo with human or animal figurines with play based around a zoo, farm, fire station, or home.
- Home corner: Tea parties, cooking, cleaning, shopping, birthday parties, and celebrations.



SUGGESTED DOSAGE

1 hour of play stations, 2 days per week for 6 months was found to significantly increase in SEL outcomes (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012).

RESOURCES

Additional resources can be found at https://www.learntoplayevents.com/resources/. Free play-based activities are available for download on the site, as well as assessments of play skills and intervention manuals for purchase.

METHODS OF INSTRUCTION

MINDFULNESS-BASED INTERVENTION

A mindfulness-based intervention was an effective means to decreasing aggression and conduct problems for 9-12-year-old children in a special education class (Malboeuf-Hurtubise et al., 2017). Behaviors most affected by intervention included: defying teacher, teasing others, arguing when denied own way, annoying others on purpose, breaking the rules, sneaking around, lying, and getting into trouble.

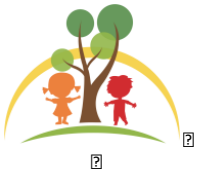
WHO

A trained therapist assisted by the school social worker delivered the intervention to the class of students in one study (Malboeuf-Hurtubise et al., 2017).

WHAT

Weekly topics with guided meditations were delivered to class and these sessions were recorded for the teacher to look over. The teacher could then reinforce what was being taught to the class. (Malboeuf-Hurtubise et al., 2017).

- Overview of class rules and participant presentations
  - Expectations and intentions in regard to the intervention
  - Introduction to mindful eating
- Body scan meditation
  - Introduction to components of emotions (thoughts, physical sensations, behavior) and stress
- Breathing meditation
  - Introduction to sitting meditation
- Breathing meditation
  - Introduction to concepts of acceptance and emotions
- Mindful check-in exercises
  - Mindfulness through the senses



- Breathing meditation with a special focus on thoughts and judgments
    - Group discussion on thoughts and judgments
- Walking meditation
    - Group discussion on self-care and acceptance
- Short sitting meditation
    - Group discussion on intentions set at first session
    - Feedback regarding intervention
    - Distribution of a pebble stone as a reminder of the experience

SUGGESTED DOSAGE

1-hour sessions once per week for 8 weeks with weekly homework assignments resulted in significant decreases in aggression and conduct problems (Malboeuf-Hurtubise et al., 2017).

RESOURCES

Resources can be found at https://www.mindfulschools.org. Free classroom resources and activity ideas are available through their blog. Paid workshops and courses are also available. Aggression and conduct problems can be measured using The Behavior Assessment System for Children, Second Edition (BASC-II).

METHODS OF INSTRUCTION

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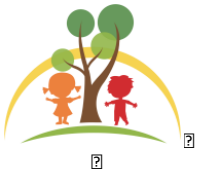

acknowledge and tolerate others, actively participate in group activities, and benefit from sustained social interactions.

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SUGGESTED DOSAGE

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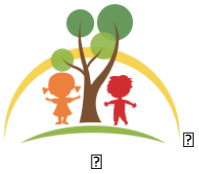

FOLLOWING DIRECTIONS

DESCRIPTION OF SEL OUTCOME

The ability to follow directions is a skill critical to engaging in social norms and expectations. Following directions can be in reference to verbal or visual prompts or following environmental cueing.

CASEL Competency: Self-Management

METHODS OF INSTRUCTION

ARTS-BASED INTERVENTION

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- Process trumping product

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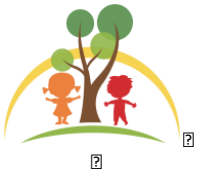


ANTI-BULLYING

DESCRIPTION OF SEL OUTCOME

Bullying can be broken down further into actions such as teasing, upsetting other students for fun, active exclusion, harassment, or threats of violence (Espelage, Rose, & Polanin, 2015). Students with disabilities are disproportionately involved in incidences of bullying, both as perpetrators and victims. When accounting for reactive emotions, such as anger, students with emotional and behavioral disorders are significantly involved with bullying perpetration. Children with emotional dysregulation or low social and communication skills are more likely to be victims of bullying, which especially affects students with autism spectrum disorder (ASD) (Espelage, Rose, & Polanin, 2015).

CASEL Competency: Social Awareness

METHODS OF INSTRUCTION

SECOND STEP®: STUDENT SUCCESS THROUGH PREVENTION (SS-SSTP)

Second Step® has demonstrated effectiveness in reducing bullying perpetration and increasing willingness to intervene in bullying situations. Successful instruction in these concepts required prior student training in empathy and communication.

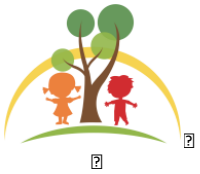
WHAT

Following these elements, anti-bullying instruction through the Second Step® curriculum contains the following components:

- Small group and whole class discussions
- Activities in pairs and small groups
- Whole class instruction
- Individual homework and coursework
- DVD content including interviews and demonstrations of skills

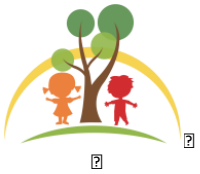
SUGGESTED DOSAGE

Dosage for this curriculum varies based on grade level, with 6th graders receiving 15 lessons and 7th and 8th graders receiving 13 lessons. Each lesson is 50 minutes long and delivered over one or two sessions. These lessons should be taught weekly or semi-weekly during the school year. This level of implementation demonstrated statistically significant increases in willingness to intervene in bullying situations and decreases in bullying perpetration and relational victimization or singling out peers in a negative way (Espelage, Rose, & Polanin, 2015; Espelage, Rose, & Polanin, 2016; Sullivan, Sutherland, Farrell, & Taylor, 2015).



RESOURCES

Though evidence for improvements in anti-bullying is based on full implementation of the Second Step® curriculum, there are several free online resources available including lesson plans, videos, and classroom activities. These resources are accessible at http://www.secondstep.org/bullying-prevention.



DECREASE SOCIAL DISCONNECTION

DESCRIPTION OF SEL OUTCOME

Increasing social connectedness is an important skill to help foster peer interaction. According to the Penn Interactive Peer Play Scale (PIPPS), children exhibiting social disconnection display withdrawn behaviors and participate in peer play at lower rates (O'Connor & Stagnitti, 2011). Disconnectedness is a barrier to SEL that needs to be addressed in order to encourage social play.

CASEL Competency: Social Awareness

METHODS OF INSTRUCTION

PLAY-BASED INTERVENTION

A play-based intervention called Learn to Play was an effective means of teaching this SEL domain for 5-8-year-old children in a specialized classroom (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012). The intervention aimed to help children develop play skills similar to their expected developmental level. Additional information on Learn to Play is located in the resources on page 36.

WHO

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WHAT

Four play stations were used in two studies to encourage growth in different areas of pretend play (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012). Therapists were there to help guide play. Play stations frequently overlapped, allowing for repetition with variation. Play scripts were embedded in the general class curriculum throughout the week, allowing for mass practice.

- Doll play: Feeding dolls, changing diapers, putting dolls to bed, and similar caring roles.
- Transport play: Trains and train tracks, car play with roads and houses, trucks in a sandbox.
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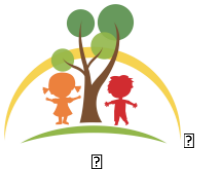


SUGGESTED DOSAGE

1 hour of play stations, 2 days per week for 6 months was found to significantly increase in SEL outcomes (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012).

RESOURCES

Additional resources can be found at https://www.learntoplayevents.com/resources/. Free play-based activities are available for download on the site, as well as assessments of play skills and intervention manuals for purchase.

METHODS OF INSTRUCTION

ARTS-BASED INTERVENTION

One study found the use of arts-based intervention, Everyday Arts for Special Education (EASE), to have a significant effect on this SEL outcome (Horowitz, 2016). The arts-based intervention included the use of music, dance, visual arts, and theatre, as well as verbal, artistic, and kinesthetic domains of communication. The objective of all EASE activities was to learn various "rules" (such as social rules, or classroom rules) in a fun and engaging way. Teaching these rules through the arts and play turned these complex SEL concepts into a game.

WHAT

All interventions and lesson plans involved the following approaches:

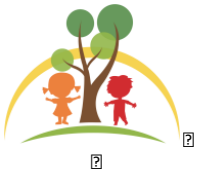
- Incorporation of fun/enjoyment
- Partnering/collaboration (peer-to-peer and teacher-student capacities)
- Cooperative play (non-competitive, no winners and losers)
- Students making choices
- Students as leaders
- Process trumping product

SUGGESTED DOSAGE

In the schools where the EASE program was implemented, they used groups of 6-12 students. The arts component of the intervention was implemented in the classroom for two years before outcome measures were analyzed. Student SEL outcomes significantly increased (Horowitz, 2016).

RESOURCES

The EASE program was implemented through grant funding from the state of New York, and in conjunction with the Urban Arts Partnership. Teachers and therapists can request free access to the online courses to be trained in EASE via their website at:



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METHODS OF INSTRUCTION

ACES SOCIAL COMPETENCE (SC) GROUP PROGRAM

The Awareness, Competence, Engagement, & Skills (ACES) Social Competence (SC) Group Program (Milligan et al., 2016) has shown promise in improving social skills competencies of children with comorbid learning disabilities and mental health challenges.

WHO

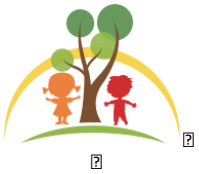
Two Masters-level psychologists implemented this program. The therapists occasionally collaborated with case managers and parents to develop individual and group social competency goals.

WHAT

This program consists of smaller groups of children (average age of 11.4 years) specifically tailored for differences in age, gender, level of social competence, and level of emotional regulation.

- "Social competence" is defined as a child's means of being able to successfully and independently initiate meaningful social interactions, acknowledge and tolerate others, actively participate in group activities, and benefit from sustained social interactions.
- "Emotional regulation" covers a number of lower level skills, including self-control, ability to follow direction or prompting, and adherence to group structure and dynamics. Children with lower emotional regulation were placed in smaller groups (dyads or triads) with a greater emphasis on foundational social skills.

Group sessions involved a wide range of activities and games designed to foster greater social skills, cooperation, and confidence. These were adjusted to a given group's level of social competence and emotional regulation. For lower level groups, activities focused on basic social skills such as turn taking, acknowledging others, and making eye contact, along with more direct instruction and scaffolding from the leading therapists. For more advanced groups, there was a greater element of "in the moment" teaching during group activities, promoting perspective-taking, understanding one's impact on peers, and social problem solving (Milligan et al., 2016).



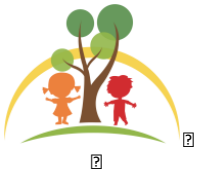
SUGGESTED DOSAGE

Each group met 1 hour weekly for 9-10 weeks following 2 weekly assessment sessions to determine group placement. Following the 10 weeks, significant gains in goal-directed initiations were observed through coded observations, as well as significant increases in assertion and engagement social skills on the parent-rated SSIS questionnaire (Milligan et al., 2016). Qualitative interviews with children, parents and teachers also supported an improvement in goal directed initiation, social self-concept, and emotional regulation. Students can be enrolled in consecutive groups with anticipated gains in social competence and emotional regulation skills, over the course of the school year.

RESOURCES

For more information on various intervention strategies for children with different forms and severities of comorbid LD and MH challenges, refer to the following Integra SC Group Program Handbook:

http://childdevelop.ca/sites/default/files/files/Sept%2022%20Integra%20LDMH%20Handbook%202016.pdf



COMMUNICATION

DESCRIPTION OF SEL OUTCOME

Auditory comprehension and expressive communication are considered to be foundational language skills that directly impact social skills. Auditory comprehension is the child's ability to understand language, whereas expressive communication is the child's ability to adequately communicate with others (Stagnitti et al., 2012).

CASEL Competency: Relationship Skills

METHODS OF INSTRUCTION

PLAY-BASED INTERVENTION

A play-based intervention called Learn to Play was an effective means of increasing auditory comprehension, expressive communication, and overall language abilities for 5 to 6-year-old children in a specialized classroom (Stagnitti et al., 2012). The intervention is aimed at helping children develop play skills similar to their expected developmental level. Additional information on Learn to Play is located in the resources on page 6.

WHO

Teachers, occupational therapists and speech language pathologists administered the intervention in two studies (Stagnitti et al., 2012). The professionals were trained in the Learn to Play program before administering the intervention.

WHAT

Four play stations were used in two studies to encourage growth in different areas of pretend play (Stagnitti et al., 2012). Therapists were there to help guide play. Play stations frequently overlapped, allowing for repetition with variation. Play scripts were embedded in the general class curriculum throughout the week, allowing for mass practice.

- Doll play: Feeding dolls, changing diapers, putting dolls to bed, and similar caring roles.
- Transport play: Trains and train tracks, car play with roads and houses, trucks in a sandbox.
- Construction play: Use of bricks, Legos, Duplo with human or animal figurines with play based around a zoo, farm, fire station, or home.
- Home corner: Tea parties, cooking, cleaning, shopping, birthday parties, and celebrations.

SUGGESTED DOSAGE

1 hour of play stations, 2 days per week for 6 months was found to significantly increase SEL outcomes (Stagnitti et al., 2012).

RESOURCES

Additional resources can be found at https://www.learntoplayevents.com/resources/. Free play-based activities are available for download on the site, as well as assessments of play skills and intervention manuals for purchase.

METHODS OF INSTRUCTION

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WHAT

All interventions and lesson plans involved the following approaches:

- Incorporation of fun/enjoyment
- Partnering/collaboration (peer-to-peer and teacher-student capacities)
- Cooperative play (non-competitive, no winners and losers)
- Students making choices
- Students as leaders
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SUGGESTED DOSAGE

In the schools where the EASE program was implemented, they used groups of 6-12 students. The arts component of the intervention was implemented in the classroom for two years before outcome measures were analyzed. Student SEL outcomes significantly increased (Horowitz, 2016).

RESOURCES

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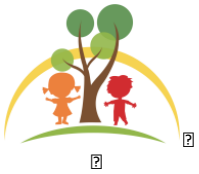

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WHO

Two Masters-level psychologists implemented this program. The therapists occasionally collaborated with case managers and parents to develop individual and group social competency goals.

WHAT

This program consists of smaller groups of children (average age of 11.4 years) specifically tailored for differences in age, gender, level of social competence, and level of emotional regulation.

- "Social competence" is defined as a child's means of being able to successfully and independently initiate meaningful social interactions, acknowledge and tolerate others, actively participate in group activities, and benefit from sustained social interactions.
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Group sessions involved a wide range of activities and games designed to foster greater social skills, cooperation, and confidence. These were adjusted to a given group's level of social competence and emotional regulation. For lower level groups, activities focused on basic social skills such as turn taking, acknowledging others, and making eye contact, along with more direct instruction and scaffolding from the leading therapists. For more advanced groups, there was a greater element of "in the moment" teaching during group activities, promoting perspective-taking, understanding one's impact on peers, and social problem solving (Milligan et al., 2016).

SUGGESTED DOSAGE

Each group met 1 hour weekly for 9-10 weeks following 2 weekly assessment sessions to determine group placement. Following the 10 weeks, significant gains in goal-directed initiations were observed through coded observations, as well as significant increases in assertion and engagement social skills on the parent-rated SSIS questionnaire (Milligan et al., 2016). Qualitative interviews with children, parents and teachers also supported an improvement in goal directed initiation, social self-concept, and emotional regulation. Students can be enrolled in consecutive groups with anticipated gains in social competence and emotional regulation skills, over the course of the school year.

RESOURCES

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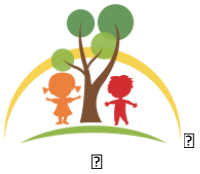

PEER INTERACTION

DESCRIPTION OF SEL OUTCOME

Interaction with peers is a foundational social skill. Interactions can be in the form of verbal or nonverbal communication in the context of an activity. Many basic, componential skills are required for successful peer interaction. According to the Penn Interactive Peer Play Scale (PIPPS), social interaction consists of a child's social play ability and includes cooperativeness and helpfulness (O'Connor & Stagnitti, 2011).

CASEL Competency: Relationship Skills

METHODS OF INSTRUCTION

PLAY-BASED INTERVENTION

A play-based intervention called Learn to Play was an effective means of teaching this SEL domain for 5-8-year-old children in a specialized classroom (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012). The intervention is aimed to help children develop play skills compared to their chronological or expected developmental level. Additional information on Learn to Play is located in the resources on page 36.

WHO

Teachers, occupational therapists and speech language pathologists administered the intervention in two studies (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012). The professionals were trained in the Learn to Play program before administering the intervention.

WHAT

Four play stations were used in one study to encourage growth in different areas of pretend play (O'Connor & Stagnitti, 2011; Stagnitti et al., 2012). Therapists were there to help guide play. Play stations frequently overlapped, allowing for repetition with variation. Play scripts were embedded in the general class curriculum throughout the week, allowing for mass practice.

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SUGGESTED DOSAGE

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METHODS OF INSTRUCTION

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WHO

Two Masters-level psychologists implemented this program. The therapists occasionally collaborated with case managers and parents to develop individual and group social competency goals.

WHAT

This program consists of 3 smaller groups of children (average age of 11.4 years) specifically tailored for differences in age, gender, level of social competence, and level of emotional regulation.

- "Social competence" is defined as a child's means of being able to successfully and independently initiate meaningful social interactions, acknowledge and tolerate others, actively participate in group activities, and benefit from sustained social interactions.
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Group sessions involved a wide range of activities and games designed to foster greater social skills, cooperation, and confidence. These were adjusted to a given group's level of social competence and emotional regulation. For lower level groups, activities focused on basic social skills such as turn taking, acknowledging others, and making eye

contact, along with more direct instruction and scaffolding from the leading therapists. For more advanced groups, there was a greater element of "in the moment" teaching during group activities, promoting perspective-taking, understanding one's impact on peers, and social problem solving (Milligan et al., 2016).

SUGGESTED DOSAGE

Each group met 1 hour weekly for 9-10 weeks following 2 weekly assessment sessions to determine group placement. Following the 10 weeks, significant gains in goal-directed initiations were observed through coded observations, as well as significant increases in assertion and engagement social skills on the parent-rated SSIS questionnaire (Milligan et al., 2016). Qualitative interviews with children, parents and teachers also supported an improvement in goal directed initiation, social self-concept, and emotional regulation. Students can be enrolled in consecutive groups with anticipated gains in social competence and emotional regulation skills, over the course of the school year.

RESOURCES

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SOCIALIZATION

DESCRIPTION OF SEL OUTCOME

Socialization encompasses numerous facets of social interaction and functioning. Children with intellectual disabilities often experience difficulty with social interaction. These difficulties often result from inability to understand emotions and the perspectives of other people. They may also be due to comorbidities in emotional regulation or information processing skills (Milligan et al., 2006). Socialization is considered to be essential because human function depends on interaction between people and their environments (Adibsereshki et al., 2014).

CASEL Competency: Relationship Skills

METHODS OF INSTRUCTION

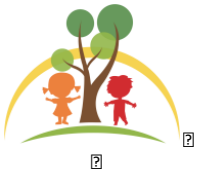
THEORY OF MIND (TOM) TRAINING

Theory of Mind (ToM) training was an effective means of increasing socialization for 8-13-year-old children in a specialized school (Adibsereshki et al., 2014). This intervention was designed to help children predict and describe their own behavior, as well as the behaviors of other people (Adibsereshki et al., 2014).

WHAT

Each session targeted different aspects of emotions, desires, and beliefs. The therapist providing the intervention pointed to a cartoon image in each training session and asked the child questions about the image. Immediate feedback was given to the child if mistakes were made (Adibsereshki et al., 2014).

- Two sessions of emotional instruction: Pictures and drawings of characters displaying different emotions were utilized. The child was then asked to identify the emotion.
- One session instructing about situational emotions: Cartoons displaying situational emotions were presented to the child. The child then answers questions about why the character had such an emotion.
- Two sessions of instructing about desire: Cartoon pictures were presented and described to the child. The child then was asked about what the character wanted and what their emotion was.
- Two sessions of instructing about beliefs: Cartoon pictures were presented and described to the child. The child then identified the person's desires, emotions, and why they felt the way they did.
- Three sessions of instructing about desire-beliefs: Cartoon pictures were presented and described to the child. The child then talked about the desire



and beliefs of the character and answered questions about the character, and why they had such feelings.

SUGGESTED DOSAGE

Individual sessions that met 3 times per week for 3 weeks for a total of 9 sessions led to significant increases in socialization (Adibsereshki et al., 2014).

METHODS OF INSTRUCTION

ARTS-BASED INTERVENTION

One study found the use of arts-based intervention, Everyday Arts for Special Education (EASE), to have a significant effect on this SEL outcome (Horowitz, 2016). The arts-based intervention included the use of music, dance, visual arts, and theatre, as well as verbal, artistic, and kinesthetic domains of communication. The objective of all EASE activities was to learn various "rules" (such as social rules, or classroom rules) in a fun and engaging way. Teaching these rules through the arts and play turned these complex SEL concepts into a game.

WHAT

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SUGGESTED DOSAGE

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RESOURCES

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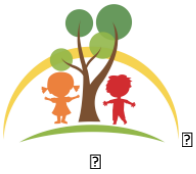

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WHO

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WHAT

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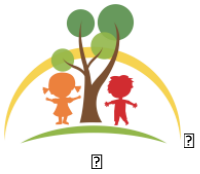

SUGGESTED DOSAGE

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PRETEND PLAY ABILITIES

DESCRIPTION OF SEL OUTCOME

A child's ability to engage in pretend play is a key component skill in the development of greater SEL. The presence of pretend play development has been associated with improved social skills and social competence (O'Connor & Stagnitti, 2011). Children's participation in pretend play is a crucial milestone in childhood development. Children with disabilities engage in pretend play less frequently than their typically developing peers. Children with autism, cognitive delays, and language development difficulties all demonstrate decreased pretend play skills (O'Connor & Stagnitti, 2011). Pretend play involves conventional-imaginative play with recognizable play materials (such as farm animals), as well as symbolic play with more common items serving other purposes (e.g. a toilet paper tube as a telescope).

CASEL Competency: Relationship Skills

METHODS OF INSTRUCTION

PLAY-BASED INTERVENTION

A play-based intervention called Learn to Play was an effective means of teaching this SEL domain for 5-8-year-old children in a specialized classroom (O'Connor & Stagnitti, 2011). The intervention aimed to help children develop play skills similar to their expected developmental level. Additional information on Learn to Play is located in the resources on page 6.

WHO

Teachers, occupational therapists and speech language pathologists administered the intervention in one study (O'Connor & Stagnitti, 2011). The professionals were trained in the Learn to Play program before administering the intervention.

WHAT

Four play stations were used in one study to encourage growth in different areas of pretend play (O'Connor & Stagnitti, 2011). Therapists were there to help guide play. Play stations frequently overlapped, allowing for repetition with variation. Play scripts were embedded in the general class curriculum throughout the week, allowing for mass practice.

- Doll play: Feeding dolls, changing diapers, putting dolls to bed, and similar caring roles.
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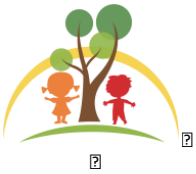


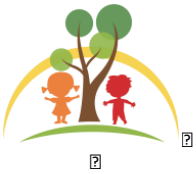
- Home corner: Tea parties, cooking, cleaning, shopping, birthday parties, and celebrations.

SUGGESTED DOSAGE

1 hour of play stations, 2 days per week for 6 months was found to significantly increase social emotional learning outcomes (O'Connor & Stagnitti, 2011).

RESOURCES

Additional resources can be found at https://www.learntoplayevents.com/resources/. Free play-based activities are available for download on the site, as well as assessments of play skills and intervention manuals for purchase.



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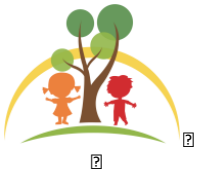

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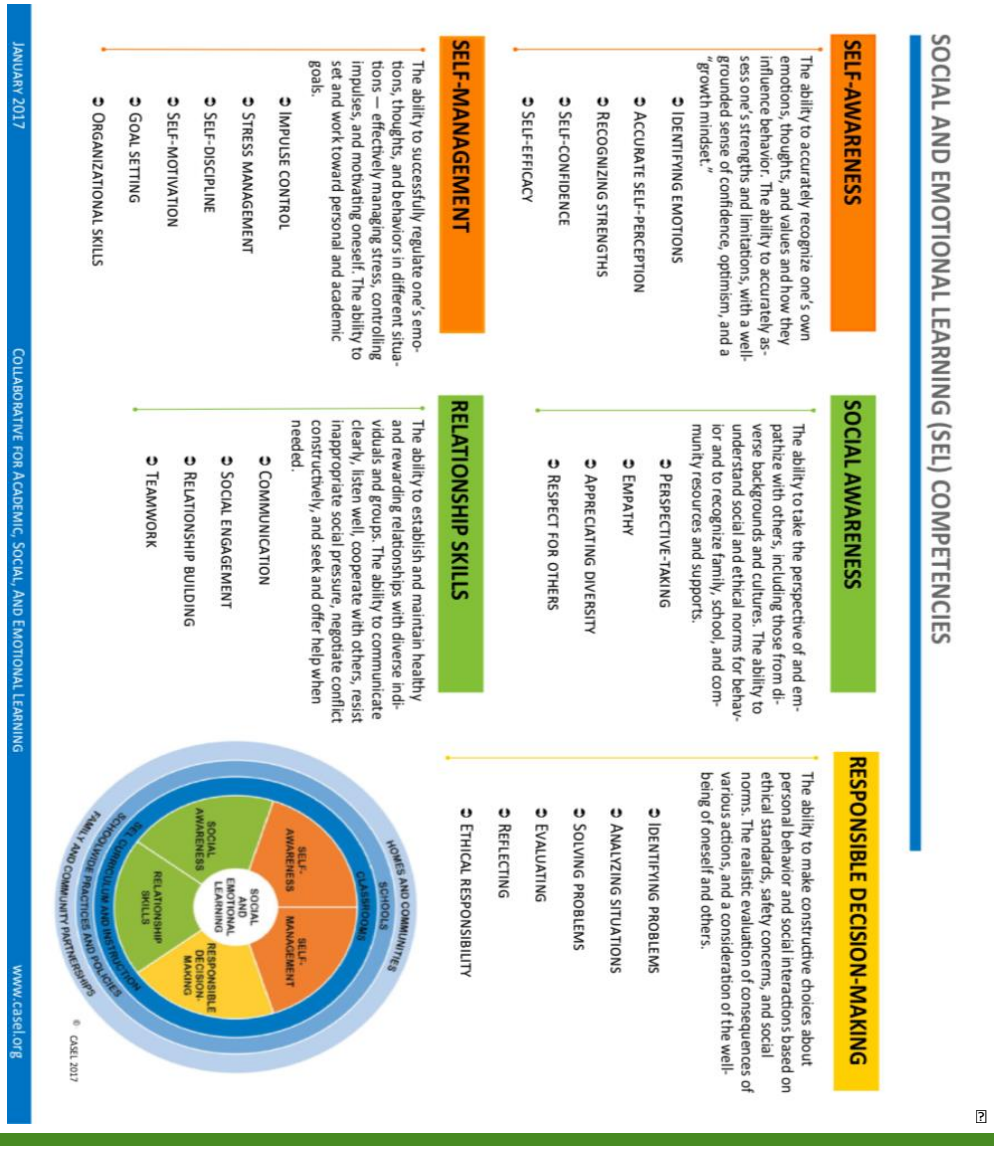
APPENDIX

APPENDIX A



***Appendix B*: Outcomes Survey**

Social Emotional Learning Reference Guide

* Required

What is your role in the School District? *
Mark only one oval.

- Teacher
- OT
- SLP
- Paraeducator
- Administrator
- School Psychologist
- Other:

With which grade level(s) do you work? *
Do you work with students in self-contained classrooms?
Mark only one oval.

- Yes
- No

Select the top 3 social emotional learning (SEL) priorities you have in your work with students *
Check all that apply.

- Pretend play
- Decrease social disruptions
- Decrease social disconnection
- Self esteem
- Socialization
- Peer interaction
- Self regulation
- Emotional awareness
- Communication
- Anti-bullying
- Following directions
- Time on task
- Other:

On the following scale, how would you rate the level of need for SEL in self-contained classrooms in your district? *
Mark only one oval.

	1	2	3	4	5	
No need						High need

Provided with a quick reference guide of interventions for SEL, how likely would you be to use it? *

Mark only one oval.

1 2 3 4 5

Not likely Very likely

What do you hope to gain from use of such a quick reference guide? *

Have you had a chance to see the quick reference guide? *

Mark only one oval.

- Yes
- No *Stop filling out this form.*

Usability of quick reference guide

Based on your first impression, how easy do you anticipate the quick reference guide will be to use? *

Mark only one oval.

1 2 3 4 5

Not easy Very easy

Rate how valuable you feel the quick reference guide will be in your daily work. *

Mark only one oval.

1 2 3 4 5

Not valuable Very valuable

Do you have concerns related to use of the quick reference guide? If so, please describe. *

Acknowledgements

The researchers would like to acknowledge the mentorship and input from their project chair, Jennifer Pitonyak, PhD, OTR/L, SCFES as well as guidance from Renee Watling, PhD, OTR/L, FAOTA throughout the research process. This investigation of the current literature and translation of knowledge would not have been possible without collaboration with Heather Austin, OTR/L, from whom we received our research direction.

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Signature of MSOT Student

Name: Jared Peltzman Date: _____

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Signature of MSOT Student

Name: Erica Petru Date: _____

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Signature of MSOT Student